NEOTHERAPEUTICS INC
Form 10-K405
April 02, 2002

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D. C. 20549

FORM 10-K

[X] ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d)
OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2001

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

For the transition period from to

Commission File Number 000-28782

NEOTHERAPEUTICS, INC.
(Exact Name of Registrant as Specified in its Charter)

DELAWARE (State or other jurisdiction of incorporation or organization)	93-0979187 (I.R.S. Employer Identification No.)
157 TECHNOLOGY DRIVE IRVINE, CALIFORNIA (Address of principal executive offices)	92618 (Zip Code)
Registrant's telephone number, including area code:	(949) 788-6700

SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT: None

SECURITIES REGISTERED PURSUANT TO SECTION 12(g) OF THE ACT:

Common Stock, $.001 par value
Common Stock Purchase Warrants

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes [X] No

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

The aggregate market value of the voting common equity held by non-affiliates of the registrant as of March 22, 2002 was $49,866,601

As of March 22, 2002, there were 26,876,951 shares of the registrant's common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Proxy Statement for the Registrant's 2002 Annual Meeting of Stockholders, to be held on June 17, 2002, are incorporated by reference in Part III of this report.

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NeoTherapeutics, Inc.'s Annual Report on Form 10-K contains certain words, not limited to, "believes," "may," "will," "expects," "intends," "estimates," "anticipates," "plans," "seeks," or "continues," that are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Readers should not put undue reliance on these forward-looking statements. Forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified. NeoTherapeutics, Inc.'s actual results may differ materially from the results projected in the forward-looking statements. Factors that might cause such a difference include, but are not limited to, those discussed in this Report including the "Risk Factors," and in "ITEM 7 - Management's Discussion and Analysis of Financial Condition and Results of Operations" included in this item 1.

PART I

ITEM 1. BUSINESS

GENERAL

NeoTherapeutics, Inc., was incorporated in Colorado as Americus Funding Corporation (or AFC) in December 1987. In August 1996, AFC changed its name to NeoTherapeutics, Inc. and in June 1997, the Company was reincorporated in the state of Delaware. NeoTherapeutics had four subsidiaries at December 31, 2001: NeoOncoRx, Inc., 90.48% owned by NeoTherapeutics and incorporated in California in November 2000; NeoTherapeutics GmbH, wholly owned by NeoTherapeutics and incorporated in Switzerland in April 1997; NeoGene Technologies, Inc., 88.4% owned by NeoTherapeutics and incorporated in California in October 1999; and NeoTravel, Inc., wholly owned by NeoTherapeutics and incorporated in California in April 2001. Advanced ImmunoTherapeutics, Inc., a previously wholly owned subsidiary of NeoTherapeutics, was merged into NeoTherapeutics in 2001. Unless the context otherwise requires, all references to the "Company", "we", "our", "us" and "NeoTherapeutics" refer to NeoTherapeutics, Inc. NeoTherapeutics GmbH, Advanced ImmunoTherapeutics, NeoTravel, NeoGene, and NeoOncoRx as a consolidated entity.

NeoTherapeutics is a development-stage pharmaceutical company engaged in the pharmaceutical business and the functional genomics business. Our

pharmaceutical business engages in discovering and developing novel technology platforms for the discovery and development, co-development and out-licensing of therapeutic drugs for nervous system disorders and in the in-licensing and development, co-development and out-licensing of late-stage cancer drugs. Our functional genomics business engages in discovering gene functions and validating novel molecular targets for innovative drug development. We conduct our pharmaceutical activities at NeoTherapeutics and NeoOncoRx, and our functional genomics activities at NeoGene. Financial information about our pharmaceutical business and functional genomics business is provided under "Item 6. SELECTED FINANCIAL DATA" and "Item 8. FINANCIAL STATEMENTS" of this Form 10-K.

PHARMACEUTICAL BUSINESS

Our pharmaceutical business engages in the discovery and development of novel drugs to treat significant medical diseases or indications associated with nervous system disorders and cancer. We currently have four drug platforms primarily focused on developing drug candidates for the following therapeutic indications: cognition, psychosis, neuroregeneration, and oncology. We have six drug candidates resulting from either our research in each platform or by in-licensing a drug candidate from another pharmaceutical company: Neotrofin(TM), AIT-034, NEO-339, Neoquin(TM), satraplatin, and elsamitrucin. For our nervous system drugs, we built and maintain a resource infrastructure to support our research and discovery of nervous system drug candidates. We believe that this is necessary for discovering novel drug candidates that the nervous system therapeutic market demands. For our oncology drug candidates, while the methods of treating cancer may change significantly within the next five to ten years, we believe that our business plan of in-licensing clinical stage cancer drugs from larger pharmaceutical companies is a cost effective and expedient business strategy. Some of our drug candidates may prove to be beneficial in additional disease indications as our research progresses. Our pharmaceutical business has never produced products or rendered services that generate revenues.

PRODUCTS IN DEVELOPMENT

Our drug platforms, drug candidates, target indications and phase of development are summarized in the following table:

		NERVOUS SYSTEM		
DRUG PLATFORM	DRUG CANDIDATE	TARGET INDICATION	PHASE OF DEVELOPMENT	
COGNITION PLATFORM	Neotrofin	Alzheimer's disease	Phase 1:	Ten add con
			Phase 2:	Fou
			Phase 2/3	One pro

	AIT-034	Dementia	Pre-clinical:	IND exp
	NEO-339	Mild cognitive impairment and attention deficit	Pre-clinical:	IND
	Novel series of compounds from which a lead candidate is to be selected	Cognitive and attentional disorders	Pre-clinical	
PSYCHOSIS PLATFORM	NEO-356	Psychosis, schizophrenia, mood disorders	Pre-clinical:	Dev to
	Novel series of compounds from which lead candidate(s) are to be selected	Psychosis, schizophrenia, mood disorders	Pre-clinical	
NEUROREGENERATION PLATFORM	Neotrofin	Spinal cord injury	Phase 1/2:	Pha
		Parkinson's disease	Phase 2:	Pha
		Peripheral neuropathy	Phase 2:	Two the che neu
		Other neurodegenerative and psychiatric diseases	Pre-clinical	
	Novel series of compounds from which a lead candidate is to be selected	Neurodegenerative diseases	Pre-clinical	

ONCOLOGY

DRUG PLATFORM	DRUG CANDIDATE	TARGET INDICATION	PHASE OF DEVELOPMENT	
ONCOLOGY PLATFORM	Satraplatin	Prostate cancer	Phase 3:	Stu
	Neoquin	Bladder cancer	Phase 2:	Stu
		Radiation	Phase 2	

		sensitization		
	Elsamitrucin	Non-Hodgkin's lymphoma	Phase 2:	Stu

NERVOUS SYSTEM, DRUGS CANDIDATES AND DEVELOPMENT STRATEGY, AND DISEASE TARGETS

NERVOUS SYSTEM

The average human brain contains approximately 10 billion nerve cells, or neurons, interconnected through a complex matrix of axons and synapses. Neurons and their interaction with each other control all sensory, motor and cognitive activities. Communication between neurons involves chemical messengers known as neurotransmitters released by the sending neuron and sent across a small gap known as a synapse that bind to corresponding receptors on a receiving neuron. Many psychiatric and neurological disorders, including memory deficits, schizophrenia, depression, anxiety, Parkinson's disease and peripheral neuropathy appear related to progressive cell loss, which results in miscommunication, partial communication or lack of communication between neurons.

Cell regeneration is a natural biological process that is involved in the healing of the human body. However, because neurons do not regenerate efficiently, the treatment and healing of nervous system diseases is complicated. Currently available drugs for severe nervous system diseases such as Alzheimer's and Parkinson's disease do not cure the disease, rather, they treat symptoms. For example, some drugs function by increasing or replacing supplies of critical neurotransmitters that temporarily improve synapse activity. However, as more nerve cells die, these drugs become less effective and are effective for shorter time periods. Eventually, too many nerve cells die for these therapeutic drugs to be noticeably effective.

Much of neuroscience therapeutic research investigates certain proteins that are necessary for the effective functioning of the nervous system. These proteins are called neurotrophic factors and are necessary to a neuron's early development and long-term function and survival. Neurotrophic factors are involved in the fundamental formation and shaping of the nervous system. The role of neurotrophic factors in neuron development and maintenance, which is supported in part by evidence from animal studies, has led scientists to hypothesize that neurotrophic factors could be used in the treatment of neurodegenerative diseases.

One very significant obstacle related to the use of neurotrophic factors for treating nervous system diseases is that the neurotrophic factor molecules are too large to pass through the blood-brain barrier, which is a filter that strictly regulates the entry of molecules into the brain and spinal cord. Therefore, oral administration or injection of neurotrophic factors is not likely to be effective in the treatment of nervous system diseases.

The approach we have taken, with our lead compound Neotrofin and some of our other research platforms, is to synthesize bifunctional small molecules which can be administered orally, pass through the blood-brain barrier, and have

the predicted target efficacy based upon pharmacologic effects of the compounds from which they were derived (See "Nervous System Drug Candidates and Development Strategy" below). We believe that such a development could represent a major advancement in the treatment of neurological disorders.

NERVOUS SYSTEM DRUG CANDIDATES AND DEVELOPMENT STRATEGY

We engage in research primarily focused on developing novel drugs that interact with the nervous system and that are therapeutic for neurological and psychiatric diseases.

Our scientific strategy is to synthesize proprietary molecules that modify specific biological processes in the nervous system. The methods by which the molecules are synthesized are proprietary and we have patented specific molecules and their methods of use. Our drug discovery platforms are based upon the use of purines and other similarly structured compounds (or Primary Molecule). Structural characteristics are very significant because they are what enable the Primary Molecule to interact with animal and human biology. We then select various other structures from known drugs or naturally occurring molecules that are known to have therapeutic activity (or Secondary Molecules). We link structural components of a Primary Molecule and a Secondary Molecule together attempting to produce a bifunctional molecule (or Bifunctional Molecules) that retains some of the characteristics of each individual molecule and exhibits new characteristics unique to the Bifunctional Molecule. We study Bifunctional Molecules for certain chemical, biochemical, pharmacological and molecular biological, physiological, and behavioral activity, in laboratory and in animal models and clinical tests. Based on our study results, Bifunctional Molecules may become part of our series of proprietary compounds. We conduct the early testing to establish therapeutic potential necessary to obtain patents on these compounds and later conduct pre-clinical testing on the safety and efficacy of our patented compounds. If pre-clinical testing supports appropriate levels of safety and efficacy, we may decide to either file an Investigational New Drug Application (or IND) for conducting clinical trials or out-license the compound to a well-established pharmaceutical company.

Neotrofin(TM): Neotrofin is our most extensively studied compound and has been the primary focus of our research efforts. Neotrofin has been shown in animal studies to enhance working (or recent) memory, the type of memory that is deficient in patients suffering from Alzheimer's disease. In addition, we believe that Neotrofin may help treat memory impairments in the aged, in stroke patients and in patients with traumatic brain injuries. Neotrofin may also help treat patients with nerve damage associated with stroke, spinal cord injury and peripheral neuropathy and neurodegenerative diseases such as Parkinson's disease and Huntington's disease.

Our pre-clinical testing involving laboratory animals has indicated that Neotrofin exhibits the following properties and/or effects:

- Reduces, delays and prevents memory deficits in aged animals and enhances memory function in young and aged animals.
- Protects brain cells against neurotoxic injury.
- Causes production of numerous neurotrophic factors.
- Causes sprouting of nerve cells in culture and in animals.
- Causes proliferation of neural stem cells.

- Is safe and effective over a wide range of doses in animals.

We are in the midst of a pivotal human clinical trial in Alzheimer's disease patients. Upon completion of this clinical trial, we intend to conduct further human clinical trials. Until completion of the entire human clinical trial process, we cannot assure you that these properties and/or effects can be replicated in humans.

We have shown that when administered to neurons in tissue culture, Neotrofin can induce neurite outgrowth effects similar to nerve growth factor, a known protein made up of over 100 amino acids that promotes nerve cell growth and may protect some types of nerve cells from damage. We have also shown that Neotrofin causes the production of mRNA (messenger ribonucleic acid) for multiple neurotrophic factors in tissue culture. In addition, we have demonstrated that oral administration of Neotrofin increases the levels of mRNA and protein for multiple neurotrophic factors in the central nervous system of rats and mice. Other researchers have shown, in animals, that administration of multiple neurotrophic factors may be more effective as a treatment method for neurodegenerative diseases than the administration of a single factor. We believe that Neotrofin's mechanism of action involves activating the genes that lead to the production of a number of different neurotrophic factors. Neurotrophic factors themselves are not orally active and do not pass through the blood-brain barrier. Therefore, should Neotrofin prove to be an effective treatment for neurological disorders, it could have two distinct practical advantages over neurotrophic factors as a treatment for such disorders: (i) it can be administered orally; and (ii) it induces the production of multiple neurotrophic factors in those areas of the brain associated with a variety of deficits. Neurotrophic factors are also implicated in the proliferation, maturation and differentiation of neural stem cells and Neotrofin has been demonstrated to induce proliferation of neural stem cells in animals.

The FDA allowed an IND for Neotrofin in June 1997. The first clinical trial of Neotrofin in the United States began in July 1997. Additional Phase 1 clinical trials evaluating safety and pharmacokinetic parameters have been conducted with Neotrofin. The results from the Phase 1 clinical trials indicate that Neotrofin is rapidly absorbed after oral administration and produces no serious side effects, even at high doses.

Four Phase 2 clinical trials of Neotrofin have been completed with a range of doses of Neotrofin for a treatment period of one to three months. The Phase 2 studies completed to date demonstrate non-statistically significant improvements in memory and behavior in patients with mild to moderate Alzheimer's disease. One of these studies was initiated in the United States in the third quarter of 1999 to study the effects of oral Neotrofin in the brain using PET (Positron Emission Tomography) imaging technology. The results of this study indicated that certain doses of Neotrofin (500 and 1000 mg/day) demonstrated positive effects on cognition in psychometric tests and positive effects on PET and EEG (electroencephalogram) parameters. As of December 31, 2001, there were Phase 2 clinical trials of Neotrofin being conducted in patients with Alzheimer's disease, Parkinson's disease, spinal cord injury and chemotherapy-induced peripheral neuropathy.

If the results from our ongoing Phase 2 clinical trial of Neotrofin in Alzheimer's disease demonstrate statistically significant improvements in memory and behavior in patients, we expect that we will have to conduct additional animal and human studies that will include Phase 3 human clinical studies prior to submitting a New Drug Application (or NDA) for Neotrofin to the FDA, or regulatory agencies in other countries, for marketing approval.

AIT-034: AIT-034 has been demonstrated in animal studies to enhance memory and to reverse memory deficits in severely impaired animals that do not respond to Neotrofin. AIT-034 has structural similarities to piracetam, a compound suggested to be both memory enhancing and neuroprotective. However, AIT-034 has been shown to have advantages over piracetam in animal models for learning and memory, with AIT-034 demonstrating a different efficacy profile and higher potency. AIT-034 has been shown to have positive memory enhancing effects in animal models of memory recall and reverse amnesia induced by specific treatments in young, adult and aged mice. The memory enhancing effects of AIT-034 are most pronounced in aged animals (24 month old mice) in which the drug restored learning and memory recall in animals that had no apparent recall capacity, a model in which other memory-enhancing agents were ineffective.

Toxicity studies conducted to date indicate that AIT-034 does not induce any systemic toxicity in animals.

An IND application for AIT-034 was filed in September 2001 and clinical trials are expected to commence in 2002 upon the completion of additional toxicology studies required by the FDA. The FDA issued new toxicology and safety testing guidelines just prior to our filing the IND. The FDA requested that these additional studies be completed prior to the start of the first clinical trial.

NEO-339: NEO-339 was designed and selected for the treatment of mild cognitive impairment, cognitive impairment associated with psychiatric disorders, and attention deficit disorders. We have shown in our research that NEO-339 produces positive effects on the acquisition of memory in certain models of memory in aged rodents, reverses the memory loss effects of certain pharmacological treatments, and improves attention in models of information processing.

Based on our research results, we believe that NEO-339 will have greater efficacy and fewer side effects than therapies currently under evaluation for the treatment of mild cognitive impairment and attention deficits associated with aging and dementia.

At the present time we intend to file an IND application with the FDA for NEO-339 in 2002.

Attention/cognition platform: We synthesized a series of compounds that we believe improve cognition, either by improving attention aspects of behavior or by affecting cognition directly. These compounds are intended to address problems seen in a variety of attention and memory disorders. Compounds from this program are in the discovery phase and have not become development candidates.

Psychosis platform: Our psychosis platform consists of the NEO-356 series and other compounds. This platform was designed to create novel compounds for schizophrenia and other psychosis-associated indications with minimal side effects by combining structural components that are known to have anti-psychotic activity with structural components that may enhance treatment of the "negative" symptoms of schizophrenia. In addition, certain of these compounds may improve memory and have other beneficial nervous system effects. We anticipate that a lead compound from this platform will be chosen as a development candidate during 2002.

Neuroregeneration platform: We have recently initiated research on additional molecules, some of which are structurally related to Neotrofin, which address specific neurodegenerative diseases or neuroregenerative mechanisms. Currently

all compounds from this program are in the discovery phase and have not become development candidates.

Our drug discovery program has accelerated its process of synthesizing and testing new compounds. We anticipate that additional compounds from this research will become development candidates within several years. Until extensive further development and testing is completed, which may take many years, if undertaken at all, the therapeutic and other effects of these compounds cannot be established.

NERVOUS SYSTEM DISEASE TARGETS

Alzheimer's Disease. Alzheimer's disease is a neurodegenerative brain disorder that leads to progressive memory loss and dementia. Alzheimer's disease generally follows a course of deterioration over eight years or more, with the earliest symptom being impairment of short-term memory. Alzheimer's disease is now recognized as the most common cause of severe intellectual impairment in persons over the age of 65 in the United States, with approximately four million Americans diagnosed as suffering from Alzheimer's disease. The number of patients with Alzheimer's disease is expected to reach 14 million by 2050. Alzheimer's disease is the fourth leading cause of death in the United States with approximately 100,000

deaths per year. The Alzheimer's Association has estimated that the overall care costs required for the treatment and care of the estimated four million U.S. patients with Alzheimer's disease are $100 billion per year. There are currently four drugs approved for the treatment of Alzheimer's disease in the United States: Cognex(R) (First Horizon), Aricept(R) (Pfizer and Eisai), Exelon(R) (Novartis) and Reminyl(R) (Janssen and Shire). We have two compounds in development, Neotrofin and AIT-034, which have shown therapeutic potential for Alzheimer's disease and dementia.

Spinal Cord Injury. There are an estimated 200,000 severely disabled survivors of spinal cord trauma in the United States with approximately 10,000 new injuries each year. The cost of care and services for these individuals is estimated to exceed $10 billion per year. Significant research efforts are currently being focused on the neurotrophic factors that can initiate and support new cell development, guide new or damaged nerves to appropriate targets and maintain neuronal function. Animal studies have shown that some functional restoration is possible with appropriate neurotrophic factors. A major obstacle to the effective use of these neurotrophic factors is the delivery of the appropriate neurotrophic factors to the damaged site. Neotrofin has been shown in mice to cause the production of several neurotrophic factors in the spinal cord after oral administration, demonstrating that it can effectively penetrate the blood-brain barrier. We believe that Neotrofin could be used to stimulate regeneration of nerves damaged by spinal cord injury. We have paid $100,000 to establish a NeoTherapeutics Fellowship as part of the Reeve-Irvine Research Center for spinal cord injury at the University of California, Irvine. We are currently conducting a Phase 1/2 clinical trial to further study the effects of Neotrofin on spinal cord injury.

Parkinson's Disease. An estimated 1-1.5 million Americans suffer from Parkinson's disease. Parkinson's disease is a neurodegenerative disease that results as a consequence of the loss of dopamine-producing neurons in the substantia nigra, a structure in the mid-brain thought to be involved in the control of voluntary movement. These cells are responsible for producing and responding to the neurotransmitter dopamine that is deficient in patients with Parkinson's disease. This dopamine deficiency leads to a variety of movement

disorders including rigidity, tremor, slowness of movement and poor balance. Dementia is also common in the later stages of the disease. Current therapy consists primarily of dopamine analogs to increase dopamine levels and drugs to alleviate the various movement symptoms. We are currently conducting a Phase 2 clinical trial to study the effects of Neotrofin on Parkinson's disease.

Peripheral Neuropathy. An estimated 60% of the 13 million diabetic patients in the United States suffer from some damage to their peripheral nerves leading to numbness and tingling of fingers, hands, toes and feet, weakness in hands and feet, and pain and/or burning sensation in the hands and feet. Peripheral neuropathy is also a major problem experienced by patients undergoing cancer chemotherapy. Chemotherapy-induced peripheral neuropathy is commonly associated with chemotherapeutic agents such as vinca alkaloids, cisplatin and Taxol(R). Chemotherapy-induced peripheral neuropathy is characterized as a variety of symptoms including an abnormal or unexplained tingling, pricking, or burning sensation on the skin (or paresthesias), abnormal sensation, such as the sensation of being pricked by pins and needles or the sensation of insects crawling on the skin (or dysethesias), and a decreased strength in the anticipated reflex actions (or hyporeflexia). Less common are motor and sensory loss, and even less common, involuntary (or autonomic) muscle dysfunction. Peripheral neuropathy also limits the extent of chemotherapy treatment for cancer. Currently there are no FDA approved treatments for chemotherapy-induced peripheral neuropathy. Phase 2 studies of Neotrofin are being conducted in cancer patients, for both the prevention and treatment of chemotherapy-induced peripheral neuropathy.

Dementia and Memory Impairment Associated with Aging. Because the populations of developed countries are aging, the costs and social burden of medical care and housing of aged persons suffering from mentally deteriorative diseases are increasing. The availability of a drug to reduce the memory impairments associated with aging would have a positive significant economic impact and would greatly improve the quality of life for the elderly population. Both Neotrofin and AIT-034 have shown to be effective in improving memory associated with aging in mice.

Mild Cognitive Impairment. Patients with mild cognitive impairment represent the earliest clinically defined group with memory impairment beyond that expected for normal individuals of the same age and education, but such patients do not meet the clinical criteria for Alzheimer's disease. It is estimated that each year, approximately 15% to 20% of patients with mild cognitive impairment will progress to Alzheimer's disease.

Cognition. Impairment of memory and cognition is a serious health care problem that is growing as the number of elderly persons increase. The incidence and prevalence of cognitive deficits increase with age. Drug candidates that alleviate deficits in memory and cognition could potentially enable elderly individuals to lead more independent, higher quality lives. Cognitive deficits are also associated with a number of other neurodegenerative diseases, including multiple sclerosis, amyotrophic lateral sclerosis and Huntington's disease.

Stroke. Among older Americans, stroke ranks as the third leading cause of death. An estimated 500,000 people in the United States suffer strokes each year. The costs associated with the treatment and care of stroke patients are estimated to be approximately $25 billion per year. Most therapeutic approaches to treating strokes are directed towards correcting the circulatory deficit or to blocking the toxic effects of chemicals released in the brain at the time of the stroke. Since Neotrofin

has the potential to be neuroprotective in addition to enhancing nerve regeneration, we believe that it may prove useful in treating stroke and, as a preventative therapeutic, the onset of nerve tissue damage caused by stroke.

Schizophrenia. An estimated 2 million Americans, or 1% of the American population, is affected by schizophrenia. Both men and women are affected in equal numbers, although onset is slightly later in women. People with schizophrenia suffer severe disturbances in thinking, social behavior and emotions such as hearing internal voices not heard by others, or believing that other people are reading their minds, controlling their thoughts, or plotting to harm them. They may exhibit eccentric behavior, social isolation, a "flat" affect, a poor attention span and a lack of motivation. While there are available treatments that can relieve some of the symptoms, these medications cause significant side effects such as involuntary motor activity, weight gain, and social withdrawal. Most people with schizophrenia continue to suffer some symptoms throughout their lives and only one in five individuals recovers completely. The cost of treating patients with schizophrenia in the United States was estimated in 1990 (the most recent information available) at $32.5 billion per year.

Neurodegenerative Diseases. The neurodegenerative disorders are a heterogeneous group of diseases of the nervous system. Many are hereditary, some are due to toxic or metabolic processes, and others may result from infections. Many of these diseases have no known causes. Some of the neurodegenerative diseases have age-associated onsets and can be chronic and progressive and without effective treatments. These diseases are often characterized by abnormalities of relatively specific regions of the brain and types of neurons. These cell groups in the different diseases determine the symptoms of the disease. Due to the prevalence, morbidity and mortality of the neurodegenerative diseases, they represent significant medical, social, and financial burdens. Recent investigations in genetics and genomics have identified specific genes for several neurodegenerative disorders.

Attention Deficits. Attention problems occur following stroke and traumatic brain injury and are among the most common disabling neurological conditions of adults. They affect the coherent processing of stimuli and production of voluntary action over time, leading to distractibility, errors of action, and poor sustained performance. Attention Deficit Hyperactivity Disorder, commonly referred to as ADD, is the most commonly diagnosed disorder among children. The National Institute of Mental Health estimates that ADD affects three to five percent of school-age children, with about one child in every classroom in the United States in need of help for this disorder.

ONCOLOGY, ONCOLOGY DRUGS CANDIDATES AND DEVELOPMENT STRATEGY, AND CANCER AND THERAPEUTIC TARGETS

ONCOLOGY

Cancer is the second leading cause of death in the United States, killing approximately 25% of all persons. In the United States, approximately 1.3 million new cancer cases were diagnosed and over 550,000 persons died from the disease in 2001, which is an average of approximately 1,500 deaths per day. More than three quarters of all cancers are diagnosed after age 50. Statistics show that men in the United States have a 50% probability and U.S. women have a 33% probability of developing cancer in their lifetime. Accordingly, social demand for improved and novel cancer treatments is very high. In addition, the National Institute of Health estimates that $60 billion was spent in 2000 for all direct cancer-related health expenditures. Cancers with anticipated cases over 100,000 per year include prostate and lung. Cancers with anticipated cases over 50,000 per year include colon, non-Hodgkin's lymphoma, bladder and skin.

Cancer is usually a malignant tumor or growth caused when cells

multiply uncontrollably, destroying healthy tissue. The different forms are:

Sarcomas: a malignant tumor that begins growing in connective tissue such as muscle, bone, fat, or cartilage;

Carcinomas: a malignant tumor that starts in the epithelium (a thin layer of tightly packed cells lining internal cavities, ducts, and organs of animals and humans and covering exposed bodily surfaces, especially in healing wounds) of an organ or body part and may spread to other parts of the body;

Leukemias: a type of cancer in which white blood cells displace normal blood leading to infection, anemia (a blood condition in which there are too few red blood cells or the red blood cells are deficient in hemoglobin, resulting in poor health), bleeding, and other disorders, and often proves fatal; and

Lymphomas: a malignant tumor originating in a lymph node, for example, Hodgkin's lymphoma or any of the range of cancers known as non-Hodgkin's lymphomas.

All cancers involve the malfunction of genes that control cell growth and division. Extensive unrestrained proliferation of cancerous cells will result in the person's death. Cancer causing agents include both internal and external factors such as chemicals, radiation, viruses, hormones, immune deficiency conditions, and inherited mutations. The production of cancerous cells most likely results from a combination of factors the body experiences over time. Immediate detection of the initial carcinogenesis is not currently possible using conventional test methodology; therefore, many cancers

are far progressed when diagnosed. Much progress has been made in the treatment of cancer, however, the primary general treatment methodologies remain surgery, radiation, chemotherapy, hormones, and immunotherapy.

CANCER DRUG CANDIDATES AND DEVELOPMENT STRATEGY

Novel cancer drugs are very exciting; however, we believe that traditional chemotherapeutic agents will remain a primary foundation of cancer treatment for the foreseeable future. Currently, we in-license from well-established pharmaceutical companies, cancer drug candidates that are in clinical trials. These drug candidates have the potential to be safe and effective therapeutic agents. We intend to develop and commercialize them in the United States and in world markets through our subsidiary NeoOncoRx. We do not currently have in-house capabilities to perform drug discovery for cancer-related therapies. The drug candidates that we in-license typically have smaller market potentials than larger pharmaceutical companies target. Large pharmaceutical companies typically require at minimum annual sales potential of $250 to $300 million; therefore, these companies are typically motivated to out-license drug candidates with expected sales potential below this market level. Late stage drug candidates generally have a higher success rate with respect to obtaining necessary FDA approval and ultimately being distributed commercially. We believe that our in-licensing of late-stage oncology drug candidates will position us to generate product revenues earlier than if we had attempted to develop oncology drug candidates through in-house drug discovery efforts. Although we are required to make milestone payments and royalty payments under the in-licensing agreements, we expect that our anticipated earlier realization of revenues and contribution to overhead and profit should bring a quicker return on investment.

Satraplatin: Currently used in treating a wide range of cancers,

platinum derivatives have been available for some time and are one of the most active classes of cytotoxic anti-cancer agents. Satraplatin is a class IV platinum derivative stemming from cisplatin and carboplatin. Like cisplatin and carboplatin, satraplatin produces interstrand and intrastrand crosslinkage in DNA of rapidly dividing cells, thus preventing DNA, RNA, and protein synthesis. One of satraplatin's major advantages over cisplatin and carboplatin is that it has good oral bioavailability and therefore does not have to be administered by intravenous infusion. Oral administration may allow outpatient treatment, thus possibly reducing the cost of patient care. Satraplatin has shown activity against platinum-sensitive tumors, such as ovarian and lung cancer, that is comparable to that of carboplatin and cisplatin. Data from previous satraplatin human clinical studies show particular efficacy in treating prostate cancer. Johnson Matthey PLC developed satraplatin and, in 2001 we in-licensed satraplatin from Johnson Matthey resulting in the transfer of the existing IND for satraplatin to us. We may initiate a Phase 3 clinical study in 2002.

Neoquin(TM): In vitro data show that Neoquin (EO9, apaziquone) has higher efficacy than mitomycin-C, a commonly used chemotherapy agent, in treating bladder cancer. It is an inactive prodrug requiring metabolic activation by a catalyst to become toxic to cells. DT-diaphorase, an enzyme found in tumor cells at high concentrations in approximately 40% of bladder cancer patients, acts as a catalyst to activate Neoquin. Neoquin is activated under both aerobic and hypoxic conditions and can selectively kill hypoxic cells, as compared to aerobic cells. In addition, studies have shown Neoquin as a potential radiation sensitizer because of its ability to act on hypoxic cells in tumors that are resistant to radiation therapy and some forms of chemotherapy. Neoquin has the potential to improve treatment of bladder cancer and a wide variety of other cancers. The New Drug Development Office (or NDDO) Research Foundation in the Netherlands developed Neoquin (EO9) and 80 related derivatives and we in-licensed it from them in 2001. We are currently conducting a Phase 2 clinical trial in the United Kingdom of intravesical administration of Neoquin in bladder cancer.

Elsamitrucin: Elsamitrucin is an anti-cancer antibiotic, with significant activity against a variety of malignant cell lines in the laboratory and experimental cancers in live animals. Elsamitrucin induces single-strand DNA breaks resulting from drug intercalation between base pairs. A base pair is a chemical unit that forms the bridge linking the complementary strands of DNA or RNA and it consists of a purine linked to a pyrimidine by hydrogen bonds. The single strand DNA break results in cell death. Elsamitrucin also causes the inhibition of topoisomerase II, an enzyme that controls the manipulation of the structure of DNA necessary for replication. Clinical studies of elsamitrucin showed greatest efficacy in intermediate-grade lymphomas. Bristol-Myers Squibb developed elsamitrucin and we in-licensed it from them in 2001. We may initiate a Phase 2 clinical study in 2002.

CANCER AND THERAPEUTIC TARGETS

Prostate Cancer. Prostate cancer is the most commonly diagnosed malignancy and the second leading cause of cancer death among men in the United States. The American Cancer Society estimated that approximately 180,000 new cases of prostate cancer were diagnosed in the United States during 2000. Furthermore, an estimated 32,000 men die annually from prostate cancer in the United States out of an estimated 165,000 prostate cancer-related deaths worldwide. Current first-line pharmaceutical therapies used in combination with surgery to treat prostate cancer are almost exclusively hormone-based therapies. Unfortunately, such hormone therapies ultimately lose their ability to contain the disease, leaving

patients with few second-line treatment options. Approximately 30 percent of all newly diagnosed prostate cancer patients will progress to hormone-refractory metastatic disease. Currently approved therapies are only effective in treating the symptoms and slowing the progression of advanced prostate cancer. We may initiate a Phase 3 study clinical study of satraplatin for the treatment of prostate cancer in 2002.

Ovarian Carcinoma. Epithelial carcinoma of the ovary is one of the most common gynecologic malignancies and the fourth most frequent cause of cancer death in women, with half of all cases occurring in women over age 65. Ovarian cancer spreads from the ovaries to the abdominal lining and cavity and invades the bowel, bladder, and lymph node system. The incidence of cancer-positive lymph nodes at primary surgery has been reported to be as high as 24% in stage I, 50% in stage II, 74% in stage III, and 73% in stage IV ovarian cancer. Tumor cells may also block diaphragmatic lymph nodes. The resulting impairment of lymphatic drainage of the abdominal cavity is thought to play a role in development of the abdominal swelling known as ascites in ovarian cancer. It is also common for the cancer to spread to the chest wall lining.

Because ovarian cancer does not produce symptoms in its early stages, most women have widespread disease at the time of diagnosis. Partly as a result of this, yearly mortality in ovarian cancer is high, approximately 65% of the incidence rate. Long-term follow-up of treated stage III and stage IV patients reveals a 5-year survival rate of less than 10% even with combined platinum-derivative chemotherapeutic therapy. Early stages of the disease are curable in a high percentage of patients. Numerous clinical trials are in progress to refine existing therapy and test the value of different approaches to postoperative drug and radiation therapy. Platinum-derivative chemotherapy is a very common therapy for stages II, III and IV. The most common platinum agents, cisplatin and carboplatin, require hospital admission for patient chemotherapy administration. Novel drugs are desirable that are more effective with a lower cost of therapy administration, such as outpatient treatment. Satraplatin may have the potential to treat ovarian and other cancers.

Bladder Cancer. Bladder cancer is the fifth most commonly diagnosed malignancy and the tenth leading cause of cancer death among persons in the United States. The American Cancer Society estimates that approximately 55,000 new cases of bladder cancer will be diagnosed in the United States during 2001. In the same year, an estimated 13,000 persons will die from bladder cancer in the United States out of an estimated 130,000 bladder cancer-related deaths worldwide. Treatment for bladder cancer is primarily surgical and is used in nearly all cases. Direct administration of immunotherapy or chemotherapy is sometimes used in some types of bladder cancer. Bladder removal (or cystectomy) is often aided by chemotherapy or radiation and has increased treatment efficacy. The higher than average survival rate in bladder cancer cases is dependent on early detection. If discovered after metastases, patient survival rates fall dramatically. New therapies for all stages of bladder cancer are in very high demand. We initiated a Phase 2 clinical study of Neoquin for the treatment of bladder cancer in 2001.

Non-Hodgkin's Lymphoma. Non-Hodgkin's lymphoma is the fourth most commonly diagnosed malignancy and the fifth leading cause of cancer death among persons in the United States. The American Cancer Society estimates that approximately 56,000 new cases of Non-Hodgkin's lymphoma will be diagnosed in the United States during 2001. In the same year, an estimated 27,000 persons will die from Non-Hodgkin's lymphoma in the United States out of an estimated 161,000 Non-Hodgkin's lymphoma-related deaths worldwide. Treatment for Non-Hodgkin's lymphoma in its early stages, when the cancer is localized in the lymph node, is usually radiation therapy. Later stage Non-Hodgkin's lymphoma is typically treated with radiation and chemotherapy. Other therapies being used include high-dose chemotherapy in conjunction with bone marrow transplantation

and monoclonal antibodies targeting lymph node cells. However, these treatments are only used in selected patients who have relapsed. Like all other cancers, early detection is vital. If discovered in later stages, Non-Hodgkin's lymphoma is often fatal. Novel therapies for Non-Hodgkin's lymphoma are in high demand. We may initiate a Phase 2 clinical study of elsamitrucin for the treatment of Non-Hodgkin's lymphoma in 2002.

Radiation Sensitization. Radiotherapy combined with certain chemotherapeutic agents or other drugs have shown increased efficacy in tumor cell death. In 1999, the National Cancer Institute announced that strong consideration should be given to treating cervical cancer patients with cisplatin and radiation concurrently rather than just radiation alone. One reason believed for combining therapies is to make oxygen-starved (or hypoxic) tumor cells more radiosensitive.

Hypoxic cells that exist within tumors are difficult to destroy by conventional treatment methods, yet they form up to 30% of any tumor. The higher the percentage of hypoxic cells in a tumor, the worse the prognosis for the patient. Hypoxic tumor cells resist radiation therapy and some forms of chemotherapy. Hypoxic cells are also suspected of developing significantly more malignant, aggressive and treatment-resistant tumors after radiotherapy and/or chemotherapy treatments that have killed off many of the oxygen-rich tumor cells.

Rarely do hypoxic cells exist in normal tissue but they are prevalent in tumors due to the poorly formed blood vessels which develop inadequately in the tumor to meet the needs of the fast growing tumor cells. The importance of hypoxia is three-fold. It is known to protect cells from the cytotoxic effects of standard chemotherapy drugs since they are dormant or non-cycling and therefore are less susceptible to cytotoxic agents. Secondly, oxygen significantly enhances the cytotoxic effects of radiation. Thirdly, a higher percentage of hypoxic tumor cells may be indicative of tumors that are stress

resistant and of a more malignant phenotype. Standard therapies primarily target better oxygenated cells, leaving the hypoxic cells to repopulate the tumor. For complete and permanent tumor remission, it is essential to target and kill hypoxic cells. One very important key to killing hypoxic tumor cells may be to make them more radiosensitive through the use of chemotherapeutic agents and/or other drugs.

Neoquin is a potential radiosensitizer. We may conduct studies to evaluate Neoquin's efficacy as a radiosensitizer in 2002.

FUNCTIONAL GENOMICS BUSINESS

We began our functional genomics business with the formation of our subsidiary NeoGene Technologies, Inc. in 1999 and entered into a collaborative research agreement with the University of California, Irvine (or UCI) to exploit certain of their functional genomics discoveries. Functional genomics involves understanding the function and purpose of each of the human genes and discovering drugs to combat diseases associated with these genes. Of the 35,000 genes that control the human body, 1,000 are genes that encode a "lock" on the cell that is a special kind of receptor called a G-protein-coupled receptor. Like a car's ignition, if you put the right key into the receptor, it will "turn on" that gene's specific function. The biological function of approximately 140 of these special genes remains unknown. These so-called "orphan genes" each have a natural key called a ligand. Discovering the ligands for orphan genes is only part of our work. The second part of our work is to gain an understanding of the

specific function of the gene. So far we have identified genes that may be used to develop drugs that could someday treat diseases such as obesity, asthma, hypertension and epilepsy.

Our collaborative research agreement with UCI grants us the exclusive right to all future technology developed by UCI through its research into functional genomics and orphan G-protein-coupled receptors in the laboratory of Dr. Olivier Civelli, in exchange for cash funding and other capital and human resources for laboratory research and potential royalty payments on the commercialization of such technology. We believe that this research complements our pharmaceutical business and may enable us to discover a greater number of drugs that more effectively address a broad array of neurological, cancer and other diseases and conditions not currently part of our pharmaceutical business focus. Our functional genomics' research operations are located in a state-of-the-art facility in Irvine, California near UCI.

FUNCTIONAL GENOMICS

In 2000, under the auspices of the Human Genome Project of the National Institutes of Health, the entire sequence of the human genetic blueprint was deciphered. Knowledge of the sequence of a gene does not tell what the function and purpose of that gene is in the body. As previously mentioned, understanding the function and purpose of each of the human genes in the body is a process called functional genomics. Of the approximately 35,000 human genes that control all of the body's functionality, approximately 1,000 are in a class called G-protein-coupled receptor, which regulate key cell functions. The purpose and function of over 100 G-protein-coupled receptors remains unknown today. They are called the "orphan" receptors.

Using genetic engineering techniques, it has been possible to deduce the function of certain orphan receptor genes, but the process is difficult, labor intensive and expensive. This work involves finding the natural ligand, or molecule, which causes the receptor to become activated to induce its normal function. Drug discovery techniques to find new drugs cannot be used unless the natural ligand, and therefore the natural function, associated with a given receptor are known. When a ligand binds to a G-protein-coupled receptor, a cascade of events occurs, involving several signaling molecules within the cell, which leads to intracellular changes causing the biological response to occur. In order to identify the natural ligand, we first find the location of the receptor in tissues, determine the type of ligand that will most likely to bind to the receptor by analysis of the DNA sequence of the receptor, and then look for molecules within the target tissues that bind to the orphan G-protein-coupled receptor. Only after the natural ligand and the localization of the receptor are found, can we determine the function. Knowing this function then allows us to find drugs that stimulate or inhibit the action of the receptor to treat diseases.

TARGET DEVELOPMENT STRATEGY

Of the 20 orphan receptor genes whose functions had been established by the end of 2001, six were discovered as a result of research conducted by Dr. Olivier Civelli of the University of California, Irvine. This is the most discovered by a single group. In September 1999, we entered into a strategic alliance under a collaborative research agreement with UCI that grants us the exclusive right to all technology and products developed by Dr. Civelli and his colleagues in exchange for research funding support in the amount of $2 million over three years. We anticipate that this agreement will be renewed in 2002.

Initially, we are focused on discovering and validating new drug development targets. Some of these targets may be new receptor/ligand systems for which we have discovered the function. Others will be new disease targets for which existing G-protein-coupled receptors will be found to have a role. We identify new drug targets that can be developed either internally by NeoGene or our pharmaceutical business, or that can be out-licensed to larger pharmaceutical companies for development. For some of these drug development targets we will purchase chemical libraries for lead generation and/or synthesize new compounds and conduct the early testing to establish the therapeutic potential necessary to obtain patents on new compounds. We intend to seek out established pharmaceutical companies as partners for the development, manufacture and marketing of certain of our compounds.

We also plan to engage in providing products and services that utilize our primary functional genomics expertise. These plans may result in revenue from strategic alliances that we enter into with other pharmaceutical companies to co-develop potential biopharmaceutical drug targets. Additionally, we may sell products to other pharmaceutical companies ancillary to our research activities.

During 2001, NeoGene licensed two of its G-protein-coupled receptor /ligand systems to Pfizer Inc. Additionally, NeoGene sold a biopharmaceutical product to one company.

BUSINESS STRATEGY

Marketing and Sales

We do not currently sell any significant products or services on a recurring basis and therefore have no marketing, sales, or distribution organization. We intend to enter into strategic alliances with multinational or large regional pharmaceutical companies having substantial financial capacity, marketing capability and clinical development expertise, to assist us in the development, marketing and sale of Neotrofin and our other drug candidates. However, we may seek to retain rights to co-market our products in the United States.

We have developed and we in-licensed several drug candidates and drug technology platforms during 2001. As of December 31, 2001 our drug candidate pipeline consisted of six drugs in various stages of development. We believe that the technology platforms we developed and are currently pursuing in both our pharmaceutical business and functional genomics business should continue providing new drug candidates for nervous system diseases, cancer related therapies, and other therapies that we will be able to develop in-house, co-develop with other pharmaceutical companies, or out-license in exchange for milestone payments and royalties.

Strategic Alliances

We believe that our patented technology platforms provide a major commercial opportunity for developing strategic alliances with larger pharmaceutical companies. We believe that any such alliance would enable us to focus on our inherent strength, namely the exploitation of the technology platforms to develop additional novel drugs.

The most common phase in which industry collaborations are completed is the discovery stage, since a license for early stage discoveries generally costs a large pharmaceutical company much less than licensing later stage products. We chose to postpone the structuring of a corporate sponsored licensing agreement for Neotrofin in favor of an early stage, government-assisted development program. By completing strategic alliances later in the development cycle, we

hope to enter into a licensing agreement for Neotrofin on terms more favorable to us. We periodically engage in preliminary licensing discussions with one or more multinational or regional pharmaceutical companies with respect to Neotrofin. We anticipate that the terms of any strategic alliance that we enter into for Neotrofin will include an up-front payment, milestone payments, royalties on product sales, and agreements requiring the licensee to purchase drug compounds from us.

We have entered into three strategic alliances to in-license niche market oncology drugs. In June 2001, we entered into a licensing agreement with the New Drug Development Office (or NDDO) Research Foundation whereby we acquired exclusive worldwide rights to Neoquin (EO9) and 80 related derivatives for which we paid NDDO an up-front payment. This agreement is subject to certain additional payments based upon achievement of defined milestones.

In August 2001, we entered into a licensing agreement with Johnson Matthey whereby we acquired exclusive worldwide rights to satraplatin (JM216) for which we paid Johnson Matthey an up-front payment. This agreement is subject to certain additional payments based upon achievement of defined milestones. One additional payment due in February 2002 was paid.

In October 2001, we entered into a licensing agreement with Bristol-Myers Squibb Company whereby we acquired exclusive worldwide rights to elsamitrucin for which we paid Bristol-Myers an up-front payment. This agreement is subject to certain additional payments based upon achievement of defined milestones.

In March 2001, we entered into an agreement whereby Pfizer Inc. acquired rights to one of our G-protein-coupled receptor/ligand systems for evaluation in their DrugPfinder program. This agreement provides for up-front payments and milestone payments based upon reaching certain milestones in the discovery and development of drug candidates in this system. As of December 31, 2001, no milestones had yet been reached regarding this agreement. In December 2001, we entered into a second DrugPfinder agreement with Pfizer for an additional G-protein-coupled receptor/ligand system under similar conditions as the previous agreement. Under these agreements, we have and will provide validated cell lines expressing the G-protein-coupled receptor as well as certain controls and supporting materials. In addition we will provide some consulting services to Pfizer.

Research Collaborations

We currently have several proprietary compounds in various stages of pre-clinical development. From time to time, we evaluate these compounds for efficacy in specialized assays or test models. We locate expert academic researchers and/or contract research organizations to perform the desired tests and provide them, through their respective academic institutions, with grants and/or contracts to perform the designated tests while we maintain proprietary rights to the compounds. We monitor these studies to ensure that these studies are performed to the highest research standards.

Production

We currently have our compounds manufactured in large scale by third party vendors and have not established plans to build our own manufacturing facilities. In connection with any licensing arrangements we may enter into regarding Neotrofin or any other drug candidate, we intend to retain the rights to control the manufacturing and sale of our compounds to our licensees. Our

preliminary estimates indicate that Neotrofin can be manufactured cost effectively. Preliminary manufacturing proposals have also been received for certain other central nervous system and cancer drug candidates and there are no foreseen problems with manufacturing these compounds.

DRUG APPROVAL PROCESS AND OTHER GOVERNMENT REGULATION

The production and marketing of our products and our research and development activities are subject to regulation for safety, efficacy and quality by numerous governmental authorities in the United States and other countries. In the United States, drugs are subject to rigorous regulation. The Federal Food, Drug and Cosmetics Act, as amended from time to time, and the regulations promulgated thereunder, as well as other federal and state statutes and regulations, govern, among other things, the testing, manufacture, safety, efficacy, labeling, storage, record keeping, approval, advertising and promotion of our proposed products. Product development and approval within this regulatory framework take a number of years and involve the expenditure of substantial resources. In addition to obtaining FDA approval for each product, each drug manufacturing establishment must be registered with, and approved by, the FDA. Domestic manufacturing establishments are subject to regular inspections by the FDA and must comply with Good Manufacturing Practices. To supply products for use in the United States, foreign manufacturing establishments must also comply with Good Manufacturing Practices and are subject to periodic inspection by the FDA or by regulatory authorities in certain of such countries under reciprocal agreements with the FDA. Drug product and drug substance manufacturing establishments located in California also must be licensed by the State of California in compliance with local regulatory requirements.

Estimated Cost of New Drug Development and Approval

The United States system of new drug approval is one of the most rigorous in the world. According to a December 2001 report by the Tufts Center for the Study of Drug Development, it costs an average of $802 million and takes between 10 and 15 years to develop a new prescription medicine and bring it to the U.S. market. Approximately one in 1,000 compounds that enter the pre-clinical testing stage eventually makes it to human testing and only one-fifth of those are ultimately approved for commercialization. In recent years, societal and governmental pressures have created the expectation that drug discovery and development costs can be reduced without sacrificing safety, efficacy and innovation. The need to significantly improve or provide alternative strategies for successful pharmaceutical discovery, research and development remains a major health care industry challenge.

Drug Discovery

In the initial stages of drug discovery, before a compound reaches the laboratory, typically thousands of potential compounds are randomly screened for activity in an assay assumed to be predictive of a particular disease process. This drug discovery process can take several years. Once a "screening lead" or starting point for drug development is found, isolation and structural determination is initiated. Numerous chemical modifications are made to the screening lead in an attempt to improve the drug properties of the lead. After a compound emerges from this process, it is subjected to further studies on the mechanism of action, further in vitro screening against particular disease targets and finally, in vivo animal screening. If the compound passes these evaluation points, animal toxicology studies are performed to begin to analyze the potential toxic effects of the compound, and if the results indicate

acceptable toxicity findings, the compound emerges from the basic research mode and moves into the pre-clinical phase.

Pre-clinical Testing

During the pre-clinical testing stage, laboratory and animal studies are conducted to show biological activity of the compound against the targeted disease and the compound is evaluated for safety. These tests can take up to three years or more to complete.

Investigational New Drug Application

After pre-clinical testing, an IND is submitted to the FDA to begin human testing of the drug. The IND becomes effective if the FDA does not reject it within 30 days. The IND must indicate the results of previous experiments, how, where and by whom the studies were conducted, how the chemical compound is manufactured, the method by which it is believed to work in the human body and any toxic effects of the compound found in the animal studies. In addition, the IND clinical protocol must be reviewed and approved by an Institutional Review Board comprised of physicians and lay people at the hospital or clinic where the proposed studies will be conducted. Progress reports detailing the results of both animal studies and human clinical trials must be submitted at least annually to the FDA.

Phase 1 Clinical Trials

After an IND becomes effective, Phase 1 human clinical trials can begin. These studies, involving small numbers of healthy volunteers or patients, can take up to one year or more to complete. The studies determine a drug's safety profile, including the safe dosage range. The Phase 1 clinical studies also determine how a drug is absorbed, distributed, metabolized and excreted by the body. Additional Phase 1 clinical trials, which may be conducted at any time during the clinical development of a new drug, evaluate interactions between the test drug and drugs commonly used in the target population and safety in patients with compromised organ systems.

Phase 2 Clinical Trials

In Phase 2 clinical trials, controlled studies of volunteer human patients with the targeted disease assess the drug's effectiveness. These studies are designed primarily to determine the appropriate dose levels and to evaluate the effectiveness of the drug on humans as well as to determine if there are any side effects on humans. These studies can take up to two years or more.

Phase 3 Clinical Trials

This phase can last up to three years or more and usually involves large numbers of human patients with the targeted disease. During the Phase 3 clinical trials, physicians monitor the human patients to determine drug candidate efficacy and to observe and report any adverse reactions that may result from long-term use of the drug on a large, more widespread, human patient population.

New Drug Application (NDA)

After completion of all three clinical trial phases, if the data indicates that the drug is safe and effective, an NDA is filed with the FDA. The NDA must contain all of the information on the drug that has been gathered to date, including data from the clinical trials. NDAs are often over 100,000 pages in length. After passage of the Prescription Drug User Fee Act, average review times for new medicine applications dropped from nearly 30 months in 1992 to

less than 12 months.

Fast Track Review

In September 1998, the FDA clarified procedures for accelerating the approval of drugs to be marketed for serious diseases for which the manufacturer can demonstrate the potential to address unmet medical needs. We do not know whether any of our drug candidates will fulfill this requirement because there are drugs currently approved and available for related therapies. However, our drug candidates might qualify for "fast track" classification if the disease indication for which we are seeking approval has no other current therapies available in the market. At this time, we have not requested

fast track designation for any of our drug candidates, however, we believe that certain of our oncology drugs may qualify for fast track classification.

The FDA also made provisions for priority review of drugs. A drug will qualify for priority review if it provides a significant improvement compared to marketed products in the treatment, diagnosis or prevention of a disease regardless of whether the indication is serious or life-threatening. We believe that some of our drug candidates may qualify for priority review.

Approval

If the FDA approves the NDA, the drug becomes available for physicians to prescribe to patients for treatment. We must continue to submit periodic reports to the FDA, including descriptions of any adverse reactions reported by doctors prescribing the drug. For certain drugs which are administered on a long-term basis, the FDA may request additional clinical studies (Phase 4) after the drug has begun to be marketed to evaluate long-term effects. The marketing of a drug after FDA approval is subject to substantial continuing regulation by the FDA, including regulation of manufacturing practices and the advertising and promotion of the drug. Certain drugs are removed from the market after receiving FDA approval for a variety of issues ranging, for example, from reports of side effects to unexplained patient death. Some drugs return to the market only after the FDA agrees that issues identified have been adequately addressed or eliminated.

In addition to regulations enforced by the FDA, we are also subject to regulation under the Occupational Safety and Health Act, the Environmental Protection Act, the Toxic Substances Control Act, the Resource Conservation and Recovery Act and other present and future federal, state or local regulations, all of which are amended from time to time. Our research and development activities involve the controlled use of hazardous materials, chemicals, biological materials and various radioactive compounds. We must comply with safety procedures for handling and disposing of such materials according to the standards prescribed by state and federal regulations, however, no matter how good compliance is with safety procedures, the risk of accidental contamination or injury from these materials cannot be completely eliminated. In addition, under certain circumstances, we may become liable due to violations by our vendors and other partners that are subject to the same standards prescribed by state and federal regulations.

For marketing outside the United States, our prospective licensees, or we, are subject to foreign regulatory requirements governing human clinical trials and marketing approval for drugs in the respective countries. The requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary widely from country to country.

RESEARCH AND DEVELOPMENT

Since our inception, we have devoted substantially all of our resources and efforts to research and development. Research and development expenditures are expensed at the time we incur them and were approximately $20.1 million in 1999, $38.8 million in 2000 and $20.6 million in 2001.

PATENTS AND PROPRIETARY RIGHTS

PHARMACEUTICAL BUSINESS

Patents and other proprietary rights are vital to our businesses. Our policy is to seek patent protection for our proprietary compounds and technology, and we intend to protect our technology, inventions and improvements to inventions that are commercially important to the development of our businesses. We also intend to rely on trade secrets, know-how, continuing technology innovations and licensing arrangements to develop and maintain our competitive position. In addition, we have applied for registration of several trademarks, including our name, NeoTherapeutics(TM), and certain of our product candidates.

Our pharmaceutical business is the assignee of nine patents issued to Alvin J. Glasky, our Chairman, Chief Executive Officer and Chief Scientific Officer and other inventors. In addition to a number of foreign patents, which have been granted corresponding to issued U.S. patents, we currently have one additional United States patent application allowed and eighteen additional U.S. patent applications and a number of corresponding foreign patent applications on file. Our issued patents expire beginning 2009 through 2019. It is possible that the scope of the coverage claimed in our patent applications could be significantly reduced prior to a patent being issued.

All issued, allowed and pending patents were assigned, by the inventors, to our pharmaceutical business. In connection with these assignments, we granted to one of the inventors, Dr. Alvin Glasky, a royalty of two percent of all revenues derived by us from the use and sale of any products that are covered by any of the aforementioned patents or any subsequent derivative patents, in each case for the life of the patent. However, Dr. Glasky will not receive any royalties with respect to sales of products which utilize patent rights licensed to us by McMaster University as described below. In the event we terminate Dr. Glasky's employment without cause, the royalty rate shall be increased to five percent, and in the event Dr. Glasky dies, his estate or family shall be entitled to continue to receive royalties at the rate of two percent.

With respect to five issued U.S. patents (US Patent Nos. 5,447,939, 5,801,184, 6,027,936, 6,338,963, and 6,350,752), we entered into a license agreement whereby McMaster University has licensed to us all patent rights belonging to McMaster University contained in such patents. These patents contain a subset of claims to which McMaster University claims patent rights. This agreement calls for annual minimum royalty payments of $25,000 per year to McMaster University, until expiration of the related patent rights, and for us to pay to McMaster University a royalty of five percent of the net sales of all products sold by us that incorporate the patent rights licensed to us by McMaster University.

Our pharmaceutical business also maintains a portfolio of patent rights as a result of our in-licensing activities. Currently our pharmaceutical

business has rights to six issued U.S. patents and one pending U.S. patent application, along with the corresponding foreign patents for Neoquin, satraplatin and elsamitrucin.

FUNCTIONAL GENOMICS BUSINESS

We also maintain a functional genomics patent portfolio with one allowed patent application and four applications pending in the United States and corresponding applications in foreign countries. All the patents in the functional genomics portfolio were assigned to the University of California by the inventors and licensed to us.

OTHER

The patent positions of our pharmaceutical and functional genomic businesses are generally uncertain and involve complex legal and factual issues. Third parties may assert patent or other intellectual property infringement claims against us with respect to our products or technology or other matters. There may be third-party patents and other intellectual property relevant to our products and technology of which we are not aware.

Patent litigation is becoming more common in the pharmaceutical industry. Litigation is sometimes necessary to defend against or assert claims of infringement, to enforce our patents, to protect trade secrets we own or to determine the scope and validity of proprietary rights of third parties. No third party has asserted that we are infringing upon their patent rights or other intellectual property, nor are we aware that we are infringing upon any third party's patent rights or other intellectual property. We may, however, be infringing upon a third party's patent rights or other intellectual property, and litigation asserting such claims might be initiated in which we would not prevail or we would not be able to obtain the necessary licenses on reasonable terms, if at all. All such litigation, whether meritorious or not, as well as litigation initiated by us against third parties, is time consuming and very expensive to defend or prosecute and to resolve.

If our competitors prepare and file patent applications in the United States that claim technology we also claim, we may have to participate in interference proceedings required by the Patent and Trademark Office to determine priority of invention, which could result in substantial costs, even if we ultimately prevail. Results of interference proceedings are highly unpredictable and may result in us having to try to obtain licenses in order to continue to conduct clinical trials, manufacture or subsequently market certain of our product candidates.

We rely on unpatented trade secrets and improvements, unpatented know-how, and continuing technological innovation to develop and maintain our competitiveness. We protect such information with employee, consultant, and corporate partner and/or collaborator confidentiality agreements as such relationships are formed. Confidentiality agreements provide that all confidential information developed or made known to an individual during the course of the employment or consulting relationship shall be kept confidential and shall not be disclosed to third parties except in specified circumstances. Agreements with employees provide that all inventions conceived by the individual while employed by us are our exclusive property. Confidentiality agreements are sometimes not honored, and if breached, we might not have adequate remedies and our trade secrets and improvements, unpatented know-how, and continuing technological innovation might become known. Additionally, our competitors may independently discover our trade secrets and improvements, unpatented know-how, and continuing technological innovation.

COMPETITION

The pharmaceutical industry is characterized by rapidly evolving technology and intense competition. Many companies of all sizes, including a number of large pharmaceutical companies as well as several specialized pharmaceutical companies, engage in drug research and development and functional genomics activities similar to ours.

Our pharmaceutical business competitors that have products on the market or in research and development that are in the same clinical focus as us include Amgen, Inc., Bayer AG, Eli Lilly and Co., Novartis AG, Bristol-Meyers Squibb Company, Glaxo SmithKline, Regeneron Pharmaceuticals, Inc., Vertex Pharmaceuticals, Inc., Guilford Pharmaceuticals, Inc., Cephalon, Inc., Aventis, Elan Corporation, Pfizer, Inc., Janssen Pharmaceutica, Inc. and Shire Pharmaceuticals Group plc,, among others. Competitors that have a strategic and clinical focus similar to ours include Axonyx Inc., Cortex Pharmaceuticals Inc., Curis Inc., Diacrin Inc., Genset SA-ADR, Interneuron Pharmaceuticals Inc., Neurobiological

Technologies Inc., Neurocrine Biosciences Inc., Neurogen Corporation, NPS Pharmaceuticals Inc., StemCells, Inc., Synaptic Pharmaceutical Corporation and Titan Pharmaceuticals Inc, among others. Many of our competitors are large-cap companies such as Eli Lilly, Shire Pharmaceuticals, and Bristol-Myers focusing on a wide range of diseases and drug indications, and many are small to medium-cap, public and private companies, often with niche focuses. Our pharmaceutical business, although it is becoming more broadly focused, remains very niched-focused. Companies focused on similar niche-markets are numerous, making the market landscape very diversified and competitive.

Technologies under development by other pharmaceutical companies could result in treatments for Alzheimer's disease and other diseases and disorders for which we are developing our own treatments. Several other companies are engaged in research and development of compounds that are similar to our research. In the event that one or more of these programs is successful, the market for some of our product candidates could be reduced or eliminated. Also, over 1,000 novel cancer treatments that utilize significant variants in pharmaceutical strategy are in the research and development pipeline worldwide.

Our functional genomics business faces competition from most major pharmaceutical companies, as well as many small pharmaceutical companies, most of which have research programs involving G-protein-coupled receptors similar to our research and development program. In addition there are several academic laboratories that are focused on orphan G-protein-coupled receptors. Successful identification of natural ligands for G-protein-coupled receptors requires considerable resources, freedom and time that are often not available in the industrial setting. Therefore, some of these companies have chosen to pursue a strategy different from ours that searches for alternative ligands that provide binding activity to the receptor in question but often do not provide clear information regarding the natural function of the receptor or the natural ligand. We think that the orphan receptor strategy being pursued by our functional genomics business, although possibly more expensive, is a more effective means of identifying and validating novel drug targets.

In addition, colleges, universities, governmental agencies and other public and private research institutions conduct research and are becoming more active in seeking patent protection and licensing arrangements to collect license fees, milestone payments and royalties in exchange for license rights to technologies that they have developed, some of which may directly compete with our technologies. These companies and institutions also compete with us in recruiting highly qualified scientific personnel. Many of our competitors have

substantially greater financial, research and development, human and other resources than we do. Furthermore, large pharmaceutical companies have significantly more experience than we do in pre-clinical testing, human clinical trials and regulatory approval procedures, among other things.

Although we have begun to conduct clinical trials with respect to Neotrofin and Neoquin, we have not conducted clinical trials or sought the approval of the FDA with respect to any of our other product candidates. Furthermore, if we are permitted to commence commercial sales of any of our product candidates and decide to manufacture and sell such products ourselves, we will also be competing with respect to manufacturing efficiency and marketing capabilities, which are business activities and processes in which we have no prior experience.

Any product for which we obtain FDA approval must also compete for market acceptance and market share. For example, a number of drugs intended for the treatment of Alzheimer's disease, memory loss associated with aging, stroke and other neurodegenerative diseases and disorders are on the market or in the later stages of clinical testing. Four drugs are currently approved for the treatment of Alzheimer's disease in the United States: Cognex(R) (tacrine), marketed by First Horizon, Aricept(R) (donepezil), marketed by Pfizer, Inc. and Eisai Co., Ltd., Exelon(R) (rivastigmine), marketed by Novartis, and Reminyl(R) (galantamine), marketed by Janssen and Shire. Additionally, numerous oncology drugs are on the market for each cancer type we are pursuing. For example, cisplatin and carboplatin are the most prevalent platinum-based derivatives used in chemotherapy. Our product candidate, satraplatin, if the FDA ever approves it, would likely compete against these drugs directly. Unless satraplatin is shown to have better efficacy and is as cost effective if not more cost effective than cisplatin and carboplatin, it may not gain acceptance by the medical field and therefore never be successful commercially.

We expect technological developments and improvements in the fields of our businesses to continue to occur at a rapid rate and, as a result, expect competition to remain intense. Although we think, based on the preliminary pre-clinical and clinical test results involving certain of our drug candidates, that we will be able to continue to compete in the discovery and early clinical development of drug candidates in our market niche, we may be wrong. Additionally, we do not have sufficient resources to compete with major pharmaceutical companies in the areas of later-stage clinical testing, manufacturing and marketing.

EMPLOYEES

As of December 31, 2001, we had 79 full-time employees, of which 15 hold Ph.D. degrees and 6 hold M.D. degrees, and 17 part-time employees. We cannot assure you that we will be able to attract and retain qualified personnel in sufficient numbers to meet our needs. Our employees are not subject to any collective bargaining agreements, and we regard our relations with our employees to be good.

RISK FACTORS

Your investment in our common stock involves a high degree of risk. You should consider the risks described below and the other information contained in this Form 10-K carefully before deciding to invest in our common stock. If any

of the following risks actually occur, our businesses, financial condition and operating results would be significantly harmed. As a result, the trading price of our common stock could decline, and you could lose a part or all of your investment.

OUR LOSSES WILL CONTINUE TO INCREASE AS WE EXPAND OUR DEVELOPMENT EFFORTS, AND OUR EFFORTS MAY NEVER RESULT IN PROFITABILITY.

Our cumulative losses during the period from our inception in 1987 through December 31, 2001 were approximately $124.1 million, almost all of which consisted of research and development and general and administrative expenses. We lost approximately $26.0 million in 1999, approximately $46.4 million in 2000 and approximately $27.8 million in 2001. We expect our losses to increase in the future as we expand our clinical trials and increase our research and development activities. We currently do not sell any products or services and we may never achieve significant revenues or become profitable. Even if we eventually generate revenues from sales, we nevertheless expect to incur significant operating losses over the next several years.

OUR POTENTIAL DRUG PRODUCTS ARE IN VARIOUS STAGES OF CLINICAL AND PRE-CLINICAL DEVELOPMENT AND MAY NOT PROVE SAFE OR EFFECTIVE ENOUGH TO OBTAIN REGULATORY APPROVAL TO SELL ANY OF THEM.

We currently are testing our first potential drug product, Neotrofin, in human clinical trials. We are currently conducting clinical trials of Neotrofin for Alzheimer's disease, spinal cord injury and Parkinson's disease. We expect to complete the Alzheimer's trial before the end of the first quarter of 2002 with full data analysis to be completed within approximately sixty days thereafter. We expect the Parkinson's disease and spinal cord injury trials to be completed by the end of 2002. In conjunction with our subsidiary, NeoOncoRx, Inc., we have acquired rights to three anti-cancer drugs that are in clinical trials, and we have commenced a clinical trial of Neotrofin for chemotherapy-induced neuropathy. We expect that we will need to complete additional trials before we will be able to apply for regulatory approval to sell Neotrofin or any of our other potential drug products. Our other proposed products are in pre-clinical development. We cannot be certain that any of our proposed products will prove to be safe or effective in treating disorders of the nervous system, cancer or any other diseases or indications. All of our proposed drugs will require additional research and development, testing and regulatory clearance before we can sell them. We cannot be certain that we will receive regulatory approval to sell any of our proposed drugs. We do not expect to have any products commercially available for at least one year, if at all.

OUR EFFORTS TO DISCOVER AND VALIDATE NEW DRUG DEVELOPMENT TARGETS MAY FAIL.

We are focused on discovering and validating new drug development targets. Some of these targets may be new receptor/ligand systems or new disease targets for which existing G-protein-coupled receptors will be found to have a role. We may not discover or validate any new drug development targets based on our efforts. In addition, we may not have sufficient funds to purchase chemical libraries necessary for lead generation and/or new compound synthesis and the conducting of early testing to establish therapeutic potential necessary to obtain patents on new compounds. Although we intend to seek out established pharmaceutical companies as partners for the development, manufacture and marketing of certain of our compounds, we may be unsuccessful in negotiating related contracts on reasonable terms for us, if at all.

OUR BUSINESS DOES NOT GENERATE THE CASH NEEDED TO FINANCE OUR CURRENT AND ANTICIPATED OPERATIONS AND OUR EXISTING CASH AND INVESTMENT SECURITIES ARE NOT SUFFICIENT TO FUND OUR OPERATIONS FOR THE NEXT 12 MONTHS.

We spent cash in 2001 at an average rate in excess of approximately

$2.3 million per month, and we expect this rate of spending to continue through the reporting of results from our current pivotal clinical trial for Neotrofin in Alzheimer's disease. The burn-rate after that will be a function of the result of that trial and the timing of our phase 3 clinical study of satraplatin in prostate cancer. If the Alzheimer's trial is positive, we would expect the burn-rate to remain stable. If based on the data we decide not to initiate another pivotal study of Neotrofin in Alzheimer's disease, the burn-rate will decrease significantly.

At the present time, our business does not generate cash from operations needed to finance our short-term operations. We will rely primarily on (a.) raising funds through the sale of our securities including under our Sales Agreement with Cantor Fitzgerald & Co., which is on a "best-efforts" basis, and/or (b.) out-licensing our technology, to meet all of our short-term cash needs. We have generated operating losses since our inception and our existing cash and investment securities, including net cash proceeds of $5.8 million raised in March 2002, are not sufficient to fund our current planned pharmaceutical and functional genomics operations for the next 12 months. Therefore, we will need to seek additional funding by the end of July 2002, or sooner, through public or private financings, including equity financings, and through other arrangements to continue operating our businesses. As has been stated by our independent public accountants in their opinion, our current financial position raises substantial doubt as to our ability to continue as a going concern.

The results of a clinical trial on our lead drug candidate Neotrofin should be available during the second quarter of 2002. If the results of this trial are sufficiently positive, we expect to be able to raise the capital necessary to fund our currently planned pharmaceutical and functional genomics operations. Additionally, we anticipate that our long-term business plans require that we enter into collaborative partnership agreements and strategic alliance agreements with larger pharmaceutical companies to co-develop, manufacture and market our product candidates. If the results of this trial are negative (or not sufficiently positive), we may not be able to raise additional funds on favorable terms, if at all. Accordingly, we would be forced to significantly change our business plans and restructure our operations to conserve cash, which would likely involve some, combination, or all of the following:

- Out-license or sell some or all of our intellectual, technological, and/or tangible property not presently contemplated and at terms that we believe would not be favorable to us;

- Reduce the size of our workforce, including the number of our scientific personnel;

- Reduce the scope and nature of our research and drug development activities including the possible termination of clinical trials; and

- Terminate operating leases and other contractual arrangements.

Although no assurance can be given, we believe that we can continue to operate as a going concern and, accordingly, our consolidated financial statements have been prepared assuming that we will continue as a going concern. Consequently, our consolidated financial statements do not include adjustments relating to the recoverability and classification of asset carrying amounts or the amount and classification of liabilities that would be required if we were not able to continue as a going concern.

We will need substantial additional funds to complete the research and development and clinical trials of Neotrofin before we will be able to submit it to the FDA for approval for commercial sale. We will also need substantial additional funds to support the continued research and development and clinical trials of our other potential products. Since we currently have no products available for commercial sale and minimal revenues from licensing in our genomics division, we must use capital to fund our operating expenses. Our operating expenses, and consequently our capital requirements, will depend on many factors, including:

- continued scientific progress in research and development to identify and develop or obtain additional product candidates;
- the costs and progress of preclinical and clinical testing of Neotrofin, our anti-cancer drugs and additional drug candidates;
- cost involved in filing, prosecuting and enforcing patent claims;
- effect of competing technological developments;
- cost of manufacturing scale-up;
- cost of commercialization activities;
- time and cost involved in obtaining regulatory approvals; and
- our ability to establish collaborative and other arrangements with third parties, such as licensing and manufacturing agreements.

COMPETITION FOR PATIENTS IN CONDUCTING CLINICAL TRIALS MAY PREVENT OR DELAY APPROVAL OF A DRUG CANDIDATE AND STRAIN OUR LIMITED FINANCIAL RESOURCES.

Many pharmaceutical companies are conducting clinical trials in patients with Alzheimer's disease, Parkinson's disease, spinal cord injuries and our other targeted diseases and indications. As a result, we must compete with them for clinical sites, physicians and the limited number of patients who fulfill the stringent requirements for participation in clinical trials. In addition, due to a lack of available information about the condition of Alzheimer's disease sufferers in the United States, we cannot be certain how many of the over 4 million patients with Alzheimer's disease in the United States would meet the requirements for participating in our clinical trials. Also, due to the confidential nature of clinical trials, we cannot be certain how many of the eligible Alzheimer's disease, Parkinson's disease, spinal cord injury and cancer patients may be enrolled in competing studies and consequently not available to us. This competition may increase costs of our clinical trials and delay the introduction of our potential products.

ANY FAILURE TO COMPLY WITH EXTENSIVE GOVERNMENTAL REGULATION COULD PREVENT OR DELAY PRODUCT APPROVAL OR CAUSE GOVERNMENTAL AUTHORITIES TO DISALLOW OUR PRODUCTS AFTER APPROVAL AND SUBJECT US TO CRIMINAL OR CIVIL LIABILITIES.

The FDA and comparable agencies in foreign countries impose many requirements on the introduction of new drugs through lengthy and detailed clinical testing and data collection procedures, and other costly and time consuming compliance procedures. These requirements apply to every stage of the clinical trial process and make it difficult to estimate when Neotrofin or any other of our potential products will be available commercially, if at all.

Our proprietary compounds will require substantial clinical trials and FDA review as new drugs. Even if we successfully enroll patients in our clinical trials, patients may not respond to our potential drug products. We think it is

prudent to expect setbacks. While we believe that we are currently in compliance with applicable FDA regulations, if we fail to comply with the regulations applicable to our clinical testing, the FDA may delay, suspend or cancel our clinical trials, or the FDA might not accept the test results. The FDA, or any comparable regulatory agency in another country, may suspend clinical trials at any time if it concludes that the trials expose subjects participating in such trials to unacceptable health risks. Further, human clinical testing may not show any current or future product candidate to be safe and effective to the satisfaction of the FDA or comparable regulatory agencies or the data derived from the clinical tests may be unsuitable for submission to the FDA or other regulatory agencies.

We cannot predict with certainty when we might submit any of our proposed products currently under development for the regulatory approval required in order to commercially sell the products. Once we submit a proposed product for commercial sale approval, the FDA or other regulatory agencies may not issue their approvals on a timely basis, if at all. If we are delayed or fail to obtain these approvals, our business and prospects may be significantly damaged. If we fail to comply with regulatory requirements, either prior to seeking approval or in marketing our products after approval, we could be subject to regulatory or judicial enforcement actions. These actions could result in:

- product recalls or seizures;
- injunctions;
- civil penalties;
- criminal prosecution;
- refusals to approve new products and withdrawal of existing approvals; and
- enhanced exposure to product liabilities.

THE LOSS OF KEY RESEARCHERS OR MANAGERS COULD SIGNIFICANTLY HINDER OUR DRUG DEVELOPMENT PROCESS AND MIGHT CAUSE OUR BUSINESS TO FAIL.

Our success depends upon the contributions of our key management and scientific personnel, especially Dr. Alvin Glasky, our Chief Executive Officer and Chief Scientific Officer. Dr. Glasky has led our research and business developments since founding our business in 1987 and is the inventor on several of our patents. Our loss of the services of Dr. Glasky or any other key personnel could delay or preclude us from achieving our business objectives. Although we currently have key-man life insurance on Dr. Glasky in the face amount of $2 million, we believe that the loss of Dr. Glasky's services would damage our research and development efforts substantially. Dr. Glasky has an employment agreement with us that provides for a three year term expiring December 31, 2003, with automatic one-year renewals thereafter unless we or Dr. Glasky gives notice of intent not to renew at least 90 days in advance of the renewal date.

In addition to Dr. Glasky, the loss of Dr. Luigi Lenaz, our Vice President, Oncology Division and President of our subsidiary NeoOncoRx, Inc., would damage the development of our anti-cancer business substantially, and the loss of the services of Dr. Olivier Civelli, consultant to our subsidiary NeoGene, Inc., would harm the development of our functional genomics business

substantially. Dr. Lenaz has an employment agreement with us that will expire on July 1, 2003, with automatic one year renewals thereafter unless Dr. Lenaz or we gives notice of intent not to renew at least 90 days in advance of the renewal date. Dr. Civelli has a consulting agreement with us that expires on March 22, 2002. This agreement includes one-year renewals thereafter unless Dr. Civelli or we gives notice of intent not to renew at least 15 days in advance of the renewal date. We also will need substantial additional expertise in marketing and other areas in order to achieve our business objectives. Competition for qualified personnel among pharmaceutical companies is intense, and the loss of key personnel, or the inability to attract and retain the additional skilled personnel required for the expansion of our business, could significantly damage our business.

IF WE CANNOT PROTECT OR ENFORCE OUR INTELLECTUAL PROPERTY RIGHTS ADEQUATELY, THE VALUE OF OUR RESEARCH COULD DECLINE AS OUR COMPETITORS APPROPRIATE PORTIONS OF OUR RESEARCH.

We actively pursue patent protection for our proprietary products and technologies. We hold rights to nine U.S. patents and currently have eighteen U.S. patent applications pending, including one which has been allowed. Our issued patents expire between 2009 and 2019. In addition, we have numerous foreign patents issued and patent applications pending corresponding to our U.S. patents. However, our patents may not protect us against our competitors. We may have to file suit to protect our patents or to defend our use of our patents against infringement claims brought by others. Because we have limited cash resources, we may not be able to afford to pursue or defend against litigation in order to protect our patent rights.

We also rely on trade secret protection for our unpatented proprietary technology. Trade secrets are difficult to protect. While we enter into proprietary information agreements with our employees, consultants and others, these agreements may not successfully protect our trade secrets or other proprietary information.

WE ARE A SMALL COMPANY RELATIVE TO OUR PRINCIPAL COMPETITORS AND OUR LIMITED FINANCIAL AND RESEARCH RESOURCES MAY LIMIT OUR ABILITY TO DEVELOP AND MARKET NEW PRODUCTS.

Many companies, both public and private, including well-known pharmaceutical companies such as Amgen, Inc., Bayer AG, Eli Lilly and Co., Novartis AG, Bristol-Meyers Squibb Company, Glaxo SmithKline, Regeneron Pharmaceuticals, Inc., Vertex Pharmaceuticals, Inc., Guilford Pharmaceuticals, Inc., Cephalon, Inc., Aventis, Elan Corporation, Pfizer, Inc., Janssen Pharmaceutica, Inc. and Shire Pharmaceuticals Group plc, are developing products to treat Alzheimer's disease and certain of the other applications we are pursuing. Competitors that have a strategic and clinical focus similar to ours include Axonyx Inc., Cortex Pharmaceuticals Inc., Curis Inc., Diacrin Inc., Genset SA-ADR, Interneuron Pharmaceuticals Inc., Neurobiological Technologies Inc., Neurocrine Biosciences Inc., Neurogen Corporation, NPS Pharmaceuticals Inc., StemCells, Inc., Synaptic Pharmaceutical Corporation and Titan Pharmaceuticals Inc, among others. Many of these companies have substantially greater financial, research and development, manufacturing, marketing and sales experience and resources than us. As a result, our competitors may be more successful than us in developing their products, obtaining regulatory approvals and marketing their products to consumers. In addition, our functional genomics business faces competition from most major pharmaceutical companies, as well as

many small pharmaceutical companies, most of which have research programs involving G-protein-coupled receptors similar to our research and development program.

While we believe, based on recent industry publications, that Neotrofin is more advanced in the drug development process than most other drugs seeking to use neurotrophic factors to treat Alzheimer's disease, we cannot be certain that Neotrofin will be the first of these drugs to receive FDA approval, if it receives approval at all. In addition, there are four drugs currently approved for the treatment of Alzheimer's disease in the United States, all of which use a different approach to the disease than Neotrofin. If these treatments are successful, or if other drugs using the neurotrophic factor approach are approved before Neotrofin, or if any of these drugs prove to be more effective than Neotrofin, the market for Neotrofin could be reduced or eliminated. Additionally, numerous oncology drugs are on the market for each cancer type we are pursuing. For example, cisplatin and carboplatin are the most prevalent platinum-based derivatives used in chemotherapy. Our product candidate, satraplatin, if the FDA ever approves it, would likely compete against these drugs directly. Unless satraplatin is shown to have better efficacy and is as cost effective if not more cost effective than cisplatin and carboplatin, it may not gain acceptance by the medical field and therefore never be successful commercially.

OUR LIMITED EXPERIENCE AT MANAGING AND CONDUCTING CLINICAL TRIALS OURSELVES MAY DELAY THE TRIALS AND INCREASE OUR COSTS.

We will continue managing and conducting some future clinical trials ourselves rather than hiring outside clinical trial contractors. We believe managing and conducting clinical trials ourselves has reduced and will continue to reduce the costs associated with our clinical trials and gives us more control over the clinical trial process. However, while some of our management has had experience at conducting clinical trials, we have limited experience in doing so as a company. While we have not experienced significant delays or increased costs to date by conducting clinical trials ourselves, as we move forward with our self-conducted clinical trials, our limited experience may delay the completion of our clinical trials and increase our costs.

HOLDERS OF OUR WARRANTS COULD ENGAGE IN SHORT SELLING TO INCREASE THE NUMBER OF SHARES OF COMMON STOCK ISSUABLE UPON CONVERSION OR EXERCISE OF THE SECURITIES AND DECREASE THE EXERCISE PRICE OF THE WARRANTS. IF THIS OCCURS, THE MARKET PRICE OF OUR COMMON STOCK MAY DECLINE.

Short selling is a practice in which an investor borrows shares from a stockholder to sell in the trading market, with an obligation to deliver the same number of shares back to the lending stockholder at a future date. Short sellers make a profit if the price of our common stock declines, allowing the short sellers to sell the borrowed shares at a higher price than they have to pay for shares delivered to the lending stockholder. Short selling increases the number of shares of our common stock available for sale in the trading market, putting downward pressure on the market price of our common stock.

Our Class B Warrants may be exercised for shares of our common stock based in some cases on a floating exercise price related to the market price of our common stock. The holders of these securities may benefit from the downward price pressures caused by short selling due to the reduced exercise price that must be paid to obtain shares of common stock upon exercise. In particular, the exercise price of our outstanding Class B Warrants, if we deliver a redemption notice, is equal to the lesser of $33.75 per share (subject to adjustment for stock splits, reverse splits and combinations) and 97% (or 95% if the market price of our common stock is less than $5.00 per share) of the closing bid price of our common stock on the trading day after the redemption notice is delivered. This fact could give the holders of our Class B Warrants incentive to sell short

our common stock after receipt of a redemption notice, which could cause the market price to decline. The holders of the Class B Warrants could then exercise their Class B Warrants and use the shares of common stock received upon exercise to replace the shares sold short and thereby profit by the decline in the market price of the common stock

caused by their short selling. There are currently outstanding Class B Warrants exercisable for 3,413,600 shares of common stock. The Class B Warrants expire on June 12, 2002.

Montrose Investments Ltd. and Strong River Investments, Inc. each hold Class B Warrants to purchase 1,706,800 shares of our common stock, for a total of 3,413,600 shares of our common stock, or approximately 13.0% of the total number of shares of our common stock outstanding, which Class B Warrants have an exercise price of $33.75 per share if we do not deliver a redemption notice. No other investors hold Class B Warrants. These facts give these two investors greater influence over the market price of our stock if we deliver a redemption notice, however, each of these investors make independent investment decisions, and each has agreed to vote any and all shares of our common stock that they own as recommended by our board of directors in any meeting of our stockholders.

THE TRADING PRICE OF OUR COMMON STOCK AND THE TERMS OF OUR WARRANTS MUST COMPLY WITH THE LISTING REQUIREMENTS OF THE NASDAQ NATIONAL MARKET OR WE COULD BE DELISTED AND THE LIQUIDITY OF OUR COMMON STOCK WOULD DECLINE.

Our common stock is listed on the Nasdaq National Market. To remain listed on this market, we must meet Nasdaq's listing maintenance standards and abide by Nasdaq's rules governing listed companies. If the price of our common stock falls below $1.00 (or under certain conditions, $3.00) per share for an extended period, or if we fail to meet other Nasdaq standards, including minimum stockholders equity of $10 million or minimum market capitalization of $50 million (both of which become applicable to us on November 1, 2002), or violate Nasdaq rules, our common stock could be delisted from the Nasdaq National Market.

Nasdaq has established rules regarding the issuance of "future priced securities" or securities convertible into common stock based on a floating conversion price, so that the number of shares of common stock issuable upon conversion of the securities is not known when the securities are sold. These rules may apply to a number of securities we have issued in the past, because the number of shares of our common stock issuable upon conversion of those securities were based upon a future price of our common stock. Nasdaq's concerns regarding these securities include the potential dilution to our existing stockholders if the price of our common stock goes down causing a large number of shares to be issued upon conversion of the securities, and the corresponding potential for excessive return on investment for the purchaser of the convertible securities. In addition, since the holders of future priced securities may benefit from a decrease in the market price of our common stock, those holders may have greater incentive to engage in manipulative practices. In light of these concerns, Nasdaq has indicated that the following rules may be implicated by future priced securities:

Stockholders must approve significant issuances of listed securities at a discount to market or book value. Nasdaq rules prohibit an issuer of listed securities from issuing 20% or more of its outstanding capital stock in one transaction or a series of related transactions at less than the greater of book value or the then current market value without obtaining prior stockholder consent.

Public interest concerns. Nasdaq may terminate the listing of a security if necessary to prevent fraudulent and manipulative acts and practices or to protect investors and the public interest. With respect to future priced securities, Nasdaq has indicated that it may delist a security if the returns with respect to the future priced security become excessive compared to the returns being earned by public investors in the issuer's securities.

Furthermore, some requirements for continued listing, such as the $1.00 (or $3.00) minimum bid price requirement, are outside of our control. Accordingly, there is a risk that Nasdaq may delist our common stock.

If our common stock is delisted, we would likely seek to list our common stock on the Nasdaq SmallCap Market or for quotation on the American Stock Exchange or a regional stock exchange, if available. However, listing or quotation on such market or exchange could reduce the market liquidity for our common stock. If our common stock were not listed or quoted on another market or exchange, trading of our common stock would be conducted in the over-the-counter market on an electronic bulletin board established for unlisted securities or in what are commonly referred to as the "pink sheets." As a result, an investor would find it more difficult to dispose of, or to obtain accurate quotations for the price of, our common stock. In addition, delisting from the Nasdaq National Market and failure to obtain listing or quotation on such other market or exchange would subject our common stock to so-called "penny stock" rules. These rules impose additional sales practice and market-making requirements on broker-dealers who sell and/or make a market in such securities. Consequently, if our common stock is delisted from the Nasdaq National Market and we fail to obtain listing or quotation on another market or exchange, broker-dealers may be less willing or able to sell and/or make a market in our common stock and purchasers of our common stock may have more difficulty selling such common stock in the secondary market. In either case, the market liquidity of our common stock would decline.

THERE ARE A SUBSTANTIAL NUMBER OF SHARES OF OUR COMMON STOCK ELIGIBLE FOR FUTURE SALE IN THE PUBLIC MARKET. THE SALE OF THESE SHARES COULD CAUSE THE MARKET PRICE OF OUR COMMON STOCK TO FALL. ANY FUTURE EQUITY ISSUANCES BY US MAY HAVE DILUTIVE AND OTHER EFFECTS ON OUR EXISTING STOCKHOLDERS.

There were 26,876,951 shares of our common stock outstanding as of March 22, 2002. In addition, security holders held options, warrants and other rights as of March 22, 2002 which, if exercised, would obligate us to issue up to an additional 11,068,822 shares of common stock at a weighted average exercise price of $15.43 per share, of which 3,913,693 shares are subject to options or warrants which are currently exercisable at the sole election of the holder at a weighted average exercise price of $7.36 per share. Some of these shares, if issued, would likely be issued at a discount to the prevailing market price. A substantial number of those shares, when we issue them upon exercise, will be available for immediate resale in the public market. In addition, we have the ability to sell up to approximately $10.0 million of our common stock pursuant to a shelf registration that will be eligible for immediate resale in the market. Additionally, we have the ability to sell up to approximately $8 million through a registration statement that we filed in connection with a certain underwriter sales agreement that, with our consent, gives the underwriter the ability to sell our common stock on a "best efforts" basis. Additional shares of our common stock sold, if any, under this agreement will be eligible for immediate resale in the market. The market price of our common stock could fall as a result of such resales due to the increased number of

shares available for sale in the market. If all 11,068,822 shares were issued without a corresponding increase in our market capitalization, the market price per share of our common stock may be reduced by approximately 30%, excluding any effects of any other developments or market factors.

We have financed our operations, and we expect to continue to finance our operations, by issuing and selling our common stock or securities convertible into or exercisable for shares of our common stock. Any issuances by us of equity securities may be at or below the prevailing market price of our common stock and may have a dilutive impact on our other stockholders. These issuances would also cause our net income, if any, or loss per share to decrease in future periods. As a result, the market price of our common stock could drop.

WE MAY BE SUBJECT TO PRODUCT LIABILITY CLAIMS, AND MAY NOT HAVE SUFFICIENT PRODUCT LIABILITY INSURANCE TO COVER ANY CLAIMS, WHICH MAY EXPOSE US TO SUBSTANTIAL LIABILITIES.

We may be exposed to product liability claims from patients who participate in our clinical trials, or, if we are able to obtain FDA approval for one or more of our potential products, from consumers of our products. Although we currently carry product liability insurance in the amount of $5 million per occurrence, it is possible that the amounts of this coverage will be insufficient to protect us from future claims. Further, we cannot be certain that we will be able to maintain our existing insurance or obtain or maintain additional insurance on acceptable terms for our clinical and commercial activities or that such additional insurance would be sufficient to cover any potential product liability claim or recall. Failure to maintain sufficient insurance coverage could have a material adverse effect on our business, prospects and results of operations if claims are made that exceed our coverage.

THE USE OF HAZARDOUS MATERIALS IN OUR RESEARCH AND DEVELOPMENT EFFORTS IMPOSES CERTAIN COMPLIANCE COSTS ON US AND MAY SUBJECT US TO LIABILITY FOR CLAIMS ARISING FROM THE USE OR MISUSE OF THESE MATERIALS.

Our research and development efforts involve the use of hazardous materials, including biological materials, chemicals and radioactive materials. We are subject to federal, state and local laws and regulations governing the storage, use and disposal of these materials and some waste products. We believe that our safety procedures for the storage, use and disposal of these materials comply with the standards prescribed by federal, state and local regulations. However, we cannot completely eliminate the risk of accidental contamination or injury from these materials. If there were to be an accident, we could be held liable for any damages that result, which could exceed our financial resources. We currently maintain insurance coverage of up to $1,000,000 per occurrence for injuries resulting from the hazardous materials we use, and up to $25,000 per occurrence for pollution clean up and removal, however, future claims may exceed these amounts. Currently the costs of complying with federal, state and local regulations are not significant, and consist primarily of waste disposal expenses. We may incur substantially increased costs to comply with regulations, particularly environmental regulations, if we develop our own commercial manufacturing facility.

THE MARKET PRICE AND VOLUME OF OUR COMMON STOCK FLUCTUATE SIGNIFICANTLY AND COULD RESULT IN SUBSTANTIAL LOSSES FOR INDIVIDUAL INVESTORS.

The stock market from time to time experiences significant price and volume fluctuations that are unrelated to the operating performance of particular companies. These broad market fluctuations may cause the market price and volume of our common stock to decrease. In addition, the market price and volume of our common stock is highly volatile. Factors that may cause the market price and volume of our common stock to decrease include fluctuations in our results of operations, timing and announcements of our technological innovations

or new products or those of our competitors, FDA and foreign regulatory actions, developments with respect to patents and proprietary rights, public concern as to the safety

of products developed by us or others, changes in health care policy in the United States and in foreign countries, changes in stock market analyst recommendations regarding our common stock, the pharmaceutical industry generally and general market conditions. In addition, the market price and volume of our common stock may decrease if our results of operations fail to meet the expectations of stock market analysts and investors. While a decrease in market price could result in direct economic loss for an individual investor, low trading volume could limit an individual investor's ability to sell our common stock, which could result in substantial economic loss as well. During 2001, the price of our common stock has ranged between $6.60 and $2.31, and the daily trading volume has been as high as 2,012,143 shares and as low as 10,222 shares, with a recent average from January 2, 2002 up to and including March 22, 2002 of approximately 144,000 shares.

OUR DIRECTORS AND EXECUTIVE OFFICERS OWN A SUBSTANTIAL PERCENTAGE OF OUR COMMON STOCK. THEIR OWNERSHIP COULD ALLOW THEM TO EXERCISE SIGNIFICANT CONTROL OVER CORPORATE DECISIONS AND TO IMPLEMENT CORPORATE ACTS THAT ARE NOT IN THE BEST INTERESTS OF OUR STOCKHOLDERS AS A GROUP.

Our directors and executive officers beneficially own approximately 11.30% of our outstanding common stock as of March 22, 2002. In addition, several of our stockholders, including Montrose Investments Ltd. and Strong River Investments, Inc. have agreed that they will vote any and all shares of our common stock that they own as recommended by our board of directors in any meeting of our stockholders. As of March 22, 2002, these stockholders collectively held warrants that could result in the issuance of up to 4,713,145 additional shares, in addition to shares of our common stock that they may own, or approximately 17.5% of the total number outstanding, if all of those securities were converted or exercised. However, none of the additional shares can be issued at the option of the holder within 60 days of March 22, 2002. As a result of these holdings, our directors and executive officers, if they acted together, could exert substantial influence over matters requiring approval by our stockholders. These matters would include the election of directors and the approval of mergers or other business combination transactions. This concentration of ownership and voting power may discourage or prevent someone from acquiring our business.

CERTAIN CHARTER AND BYLAWS PROVISIONS AND OUR STOCKHOLDER RIGHTS PLAN MAY MAKE IT MORE DIFFICULT FOR SOMEONE TO ACQUIRE CONTROL OF US OR REPLACE CURRENT MANAGEMENT.

Certain provisions of our Certificate of Incorporation and Bylaws may make it more difficult for someone to acquire control of us or replace our current management. These provisions may make it more difficult for stockholders to take certain corporate actions and could delay, discourage or prevent someone from acquiring our business or replacing our current management, even if doing so would benefit our stockholders. These provisions could limit the price that certain investors might be willing to pay for shares of our common stock.

On December 13, 2000, we adopted a Stockholder Rights Plan pursuant to which we have distributed rights to purchase units of our capital Series B Junior Participating Preferred Stock. The rights become exercisable upon the earlier of ten days after a person or group of affiliated or associated persons has acquired 20% or more of the outstanding shares of our common stock or ten

business days after a tender offer has commenced that would result in a person or group beneficially owning 20% or more of our outstanding common stock. These rights could delay or discourage someone from acquiring our business, even if doing so would benefit our stockholders.

OUR BUSINESSES ARE SOMETIMES INVOLVED, OR PERCEIVED BY THE PUBLIC TO BE INVOLVED, IN ACTIVITIES THAT MAY BE SEEN AS MORALLY UNACCEPTABLE AND THEREFORE MAY BE LEGISLATED AGAINST, PREVENTING US FROM ENGAGING IN CERTAIN RESEARCH AND DEVELOPMENT ACTIVITIES AND EVENTUALLY MARKETING CERTAIN PRODUCT CANDIDATES.

Our businesses involve the use of animals for certain research and development activities. Some groups perceive this as inhumane or otherwise morally unacceptable. Additionally, our businesses involve gene research to achieve specifically selected biological result(s): in the case of our functional genomics business, the treatment of diseases or other disease related indications. This too may be perceived as morally unacceptable. If pressure by these groups and others results in legislation that limits or prevents any of our research and development activities, our businesses may be significantly harmed.

SIGNIFICANT EVENTS DURING 2001 HAD A NEGATIVE EFFECT ON OUR BUSINESS, THE BUSINESS OF OUR VENDORS AND ASSOCIATES AND OUR ABILITY TO RAISE ADDITIONAL NEEDED FUNDS.

On September 11, 2001, terrorists perpetrated the worst attack in history against the United States. The U.S. economy slowed and the fear of future attacks effected companies' perceived ability to safely conduct business. In addition, certain very significant business failures and other negative business events appear to have stymied investors' confidence in the capital markets (or stock markets) and general consumer confidence. We believe that these events have had a negative impact and will likely continue to have a negative impact for a continued unknown duration of time on our business, the business of our vendors and associates, and our ability to raise additional needed funds.

ITEM 2. PROPERTIES

Our primary research and development and corporate administrative offices are located in a 34,320 square foot facility containing office and laboratory space, constructed for us in Irvine, California. We also entered into a short-term lease that makes available to us an additional 31,640 square feet of office space in a facility adjacent to our primary Irvine facility. We also sub-leased from UCI, a new 10,000 square foot laboratory and administrative facility in Irvine, California adjacent to the University in which we conduct our functional genomics business activities. Each of our facilities is suitable and adequate to undertake each of our business' current research efforts. Depending on certain clinical trial results, we anticipate extending our short-term lease or leasing additional local laboratory space.

The primary Irvine facility is occupied under a non-cancelable lease for seven years and contains two five-year options to renew. The base monthly rent for the primary Irvine facility is currently $40,435 which amount is subject to certain cost of living increases, plus taxes, insurance and common area maintenance. The facility adjacent to the primary Irvine facility is occupied under a six-month non-cancelable lease that contains one five-year option to renew. This lease has expired and we are currently occupying the facility on a month-to-month basis. The base monthly rent is $34,417 and is

subject to taxes, insurance and common area maintenance. Under our sub-lease with UCI, sub-lease payments are at the rate of 50% of the basic rent charge, subject to certain conditions, including our continuation of specific grant awards to UCI, and commenced during June 2001. Under those conditions, if UCI is not able to pay all or part of their 50% portion of the sublease payment, we are obligated to pay, in addition to our 50% of the sub-lease payment, the amount that UCI is not able to pay. During 2001, we paid approximately 85% of the sublease obligations. The base monthly rent is $26,064, plus taxes, insurance, common area maintenance and scheduled rent increases for succeeding years over the five-year term of the sublease.

We lease a small administrative office in Zurich, Switzerland on an expense-sharing basis. The financial and other terms of this lease are ordinary and are not material to our businesses.

ITEM 3. LEGAL PROCEEDINGS

We are involved in one matter of litigation that we consider ordinary routine litigation incidental to our business. Our policy is to accrue during a period, as a charge to operations, amounts related to legal matters if it is probable that a liability has been incurred and the amount of loss can be reasonably estimated, as required by SFAS No. 5, Accounting for Contingencies. Although it is very difficult to accurately predict the ultimate outcome of pending litigation and threatened litigation, we believe that it will not materially affect our consolidated financial statements.

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

No matters were submitted to a vote of security holders during the fourth quarter ended December 31, 2001.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

COMMON STOCK

As of March 22, 2002, there were 26,876,951 shares of common stock outstanding held of record by approximately 400 stockholders. On March 22, 2002, the closing bid price of our common stock was $1.93 per share.

MARKET FOR SECURITIES

Our common stock is traded on the Nasdaq Stock Market under the symbol NEOT. The high and low trades of our common stock reported by Nasdaq during each quarter ended in 2000 and 2001 were as follows:

	High	Low
YEAR 2000		
Quarter Ended		
March 31	$ 17.75	$ 16.81
June 30	$ 10.88	$ 10.69

September 30	$ 8.81	$ 7.38
December 31	$ 4.44	$ 3.88
YEAR 2001		
Quarter Ended		
March 31	$ 5.88	$ 5.58
June 30	$ 4.18	$ 3.94
September 30	$ 3.22	$ 3.00
December 31	$ 3.67	$ 3.55

The high and low trades of our common stock reported by Nasdaq reflect inter-dealer prices, without retail mark-ups, mark-downs or commissions, and may not represent actual transactions.

DIVIDENDS

We have never paid cash dividends on our common stock and we do not intend to pay dividends in the foreseeable future.

RECENT SALES OF UNREGISTERED SECURITIES

The following is a summary of transactions involving sales of our securities that were not registered under the Securities Act of 1933, as amended (the "Securities Act"), and have not been previously included in a quarterly report on Form 10-Q. Exemption from registration was relied upon under Section 4(2) of the Securities Act for all transactions listed.

As of December 18, 2000, Brighton Capital, Ltd. ("Brighton") acquired a five-year warrant to purchase up to 10,000 shares of our common stock at $6.17 per share for its services as a finder with respect to the negotiation and execution of the sale of our securities to a certain investor on December 18, 2000. We made no solicitation in connection with Brighton's acquisition, other than communications with the purchaser of our securities and Brighton; we obtained representations from Brighton regarding its investment intent, experience and sophistication; and the warrant was not acquired in lieu of the payment of fees for services. This warrant replaces the warrant to purchase 10,000 shares of our subsidiary NeoGene Technologies, Inc.'s common stock at $45.00 per share reported as compensation paid to Brighton for the same transaction in our Report on Form 10-K, as amended, filed on April 25, 2001.

As of January 25, 2001, a clinical research organization acquired 50,000 shares of our common stock in a settlement of amounts owing following the termination in November 2000 of clinical studies being conducted on our behalf by the clinical research organization. We made no solicitation in connection with the settlement, other than communications with the organization; we obtained representations from the organization regarding its investment intent, experience and sophistication; and the shares were not acquired as part of a plan of financing.

As of April 17, 2001, Brighton acquired a five-year warrant to purchase up to 30,000 shares of our common stock at $15.00 per share for its services as a finder with respect to the negotiation and execution of the sale of our securities to certain investors on April 17, 2001. We made no solicitation in connection with Brighton's acquisition, other than communications with the purchasers of our securities and Brighton; we obtained representations from Brighton regarding its investment intent, experience and sophistication; and the warrant was not acquired in lieu of the payment of fees for services.

As of May 18, 2001, Brighton acquired a five-year warrant to purchase up to 29,750 shares of our common stock at $15.00 per share for its services as a finder with respect to the negotiation and execution of the sale of our securities to certain investors on May 17, 2001. We made no solicitation in connection with Brighton's acquisition, other than communications with the purchasers of our securities and Brighton; we obtained representations from Brighton regarding its investment intent, experience and sophistication; and the warrant was not acquired in lieu of the payment of fees for services.

As of June 29, 2001, NDDO Research Foundation ("NDDO") acquired 30,000 shares of our common stock pursuant to a license agreement with us. Pursuant to the terms of the agreement, the shares may not be sold until one year has elapsed from the date of signing the agreement, but if at one year from the date of signing the agreement their value is less than $100,000 we will pay the NDDO such sum in cash, our common stock, or other negotiable security as will bring their value up to $100,000. We made no solicitation in connection with the agreement, other than communications with NDDO; we obtained representations from the organization regarding its investment intent, experience and sophistication; and the shares were not acquired as part of a plan of financing.

As of August 10, 2001, Gruntal & Co., L.L.C. acquired a five-year warrant to purchase up to 125,000 shares of our common stock at an exercise price of $3.80 per share for its services as investment banker and financial advisor to us. We made no solicitation in connection with Gruntal's acquisition, other than communications with Gruntal; we obtained representations from Gruntal regarding its investment intent, experience and sophistication; and the warrant was not acquired in lieu of the payment of fees for services.

As of December 7, 2001, Cantor Fitzgerald & Co. ("Cantor") acquired a five-year warrant to purchase up to 107,451 shares of our common stock at an exercise price of $5.12 per share for its services as underwriter of sales of our securities in October and November 2001. We made no solicitation in connection with Cantor's acquisition, other than communications with the purchasers of our securities and Cantor; we obtained representations from Cantor regarding its investment intent, experience and sophistication; and the warrant was not acquired in lieu of the payment of fees for services.

As of December 13, 2001, Cantor acquired a five-year warrant to purchase up to 24,688 shares of our common stock at an exercise price of $5.01 per share for its services as underwriter of sales of our securities in December 2001. We made no solicitation in connection with Cantor's acquisition, other than communications with the purchasers of our securities and Cantor; we obtained representations from Cantor regarding its investment intent, experience and sophistication; and the warrant was not acquired in lieu of the payment of fees for services.

As of December 13, 2001, a placement agent acquired a five-year warrant to purchase up to 250,000 shares of our common stock for its services as placement agent to us. This warrant may be exercised with respect to 125,000 shares at an exercise price of $4.04 per share, and the warrant may become exercisable with respect to the remaining 125,000 shares if we complete financing transactions with parties introduced to us by the placement agent. To date, the warrant has become exercisable with respect to an additional 6,667 shares of our common stock at an exercise price of $2.00 per share. We made no solicitation in connection with the placement agent's acquisition, other than communications with the placement agent; we obtained representations from the placement agent regarding its investment intent, experience and sophistication; and the warrant was not acquired in lieu of the payment of fees for services.

ITEM 6. SELECTED FINANCIAL DATA

The following table presents our selected financial data. Financial data for the years ended 1999, 2000 and 2001 and as of December 31, 2000 and 2001 has been derived from our audited financial statements included elsewhere in this Form 10-K and should be read in conjunction with those financial statements and accompanying notes and with "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations." Financial data for the years ended 1997 and 1998 and as of December 31, 1997, 1998 and 1999 has been derived from our audited financial statements not included herein.

CONSOLIDATED FINANCIAL INFORMATION (IN THOUSANDS):

STATEMENT OF OPERATIONS DATA FOR THE YEARS ENDED DECEMBER 31:	1997	1998	1999	2000	
Revenues	$ -	$ -	$ -	$ -	$
Operating expenses:					
Research and development	4,508	8,542	20,058	38,767	
General and administrative	2,342	3,123	3,465	5,107	
Settlement of litigation	-	-	2,458	-	
Loss from operations	(6,850)	(11,665)	(25,981)	(43,874)	
Other income (expense)	688	60	(9)	(2,553)	
Net loss	$ (6,162)	$ (11,605)	$ (25,990)	$ (46,427)	$
Basic and diluted loss per share	$ (1.14)	$ (2.07)	$ (3.68)	$ (4.37)	$

BALANCE SHEET DATA AT DECEMBER 31:	1997	1998	1999	2000	
Cash, cash equivalents and marketable securities	$ 9,132	$ 2,867	$ 9,681	$ 11,470	$
Property and equipment, net	3,475	3,252	3,161	3,416	
Total assets	13,198	6,826	13,174	15,781	
Current liabilities	2,478	2,364	4,757	5,110	
Long-term debt, less current portion	177	1,126	637	474	
Other non-current-liabilities	-	46	75	87	
Minority interest in consolidated subsidiaries	-	-	-	7,280	
Total stockholders' equity	$ 10,543	$ 3,290	$ 7,705	$ 2,830	$

PHARMACEUTICAL BUSINESS FINANCIAL INFORMATION (IN THOUSANDS):

STATEMENT OF OPERATIONS DATA FOR THE YEARS ENDED DECEMBER 31:	1997	1998	1999	2000	

Revenues	$ -	$ -	$ -	$ -	$
Operating expenses:					
Research and development	4,508	8,542	19,873	38,131	
General and administrative	2,342	3,123	3,438	4,643	
Settlement of litigation	-	-	2,458	-	
Loss from operations	(6,850)	(11,665)	(25,769)	(42,774)	
Other income (expense)	688	60	(9)	(1,080)	
Minority interest in consolidated subsidiaries' net loss	-	-	-	(1,464)	
Net loss	$ (6,162)	$ (11,605)	$ (25,778)	$ (45,318)	$

BALANCE SHEET DATA AT DECEMBER 31:	1997	1998	1999	2000	
Property and equipment, net	$ 3,475	$ 3,252	$ 3,161	$ 3,416	$
Total assets	$ 13,198	$ 6,826	$13,172	$ 10,317	$

FUNCTIONAL GENOMICS BUSINESS FINANCIAL INFORMATION (IN THOUSANDS):

STATEMENT OF OPERATIONS DATA FOR THE YEARS ENDED DECEMBER 31:	1997	1998	1999	2000	
Revenues	$ -	$ -	$ -	$ -	$
Operating expenses:					
Research and development	-	-	185	636	
General and administrative	-	-	27	464	
Loss from operations	-	-	(212)	(1,100)	
Other income (expense)	-	-	-	(10)	
Net loss	$ -	$ -	$ (212)	$ (1,110)	$

BALANCE SHEET DATA AT DECEMBER 31:	1997	1998	1999	2000	2001
Property and equipment, net	$ -	$ -	$ -	$ -	$ 998
Total assets	$ -	$ -	$ 2	$5,464	$3,149

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

OF OPERATIONS

You should read the following discussion of the financial condition and results of our operations in conjunction with the financial statements and the notes to those statements included elsewhere in this report. The discussion in this report contains forward-looking statements that involve risks and uncertainties, such as statements of our plans, objectives, expectations and intentions. The cautionary statements made in this report should be read as applying to all related forward-looking statements wherever they appear in this report. Our actual results could differ materially from those discussed here. Factors that could cause or contribute to these differences include those discussed in "Risk Factors," as well as those discussed elsewhere.

CRITICAL ACCOUNTING POLICES AND ESTIMATES

Our discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of theses financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. On an on-going basis, we evaluate our estimates, including cash requirements resulting from estimating: planned research & development activities and general and administrative requirements, the retention of key personnel, certain clinical trial results, maintained market need for our product candidates and other major business assumptions.

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

Development Stage Enterprise, Liquidity, and Going Concern

We have prepared the consolidated financial statements under the assumption that we are a going concern. We are in the development stage and, therefore, we devote substantially all of our efforts to research and development activities. Since our inception, we have incurred cumulative losses of approximately $124.1 million through December 31, 2001, and expect to incur substantial losses over the next several years.

We spent cash in 2001 at an average rate in excess of approximately $2.3 million per month, and we expect this rate of spending to continue through the reporting of results from our current pivotal clinical trial for Neotrofin in Alzheimer's disease. Our burn-rate after that will be a function of the result of that trial and the timing of our phase 3 clinical study of satraplatin in prostate cancer. If the Alzheimer's trial is positive, we would expect our burn-rate to remain stable. If, based on the data, we decide not to initiate another pivotal study of Neotrofin in Alzheimer's disease, our burn-rate will decrease significantly.

At the present time, our business does not generate cash from operations needed to finance our short-term operations. We will rely primarily on (a.) raising funds through the sale of our securities including under our Sales Agreement with Cantor Fitzgerald & Co., which is on a "best-efforts" basis, and/or (b.) out-licensing our technology, to meet all of our short-term cash needs. We have generated operating losses since our inception and our

existing cash and investment securities, including net cash proceeds of $5.8 million raised in March 2002, are not sufficient to fund our current planned pharmaceutical and functional genomics operations for the next 12 months. Therefore, we will need to seek additional funding by the end of July 2002, or sooner, through public or private financings, including equity financings, and through other arrangements to continue operating our businesses. As has been stated by our independent public accountants in their opinion, our current financial position raises substantial doubt as to our ability to continue as a going concern.

The results of a clinical trial on our lead drug candidate Neotrofin should be available during the second quarter of 2002. If the results of this trial are sufficiently positive, we expect to be able to raise the capital necessary to fund our currently planned pharmaceutical and functional genomics operations. Additionally, we anticipate that our long-term business plans require that we enter into collaborative partnership agreements and strategic alliance agreements with larger pharmaceutical companies to co-develop, manufacture and market our product candidates. If the results of this trial are negative (or not sufficiently positive), we may not be able to raise additional funds on favorable terms, if at all. Accordingly, we would be forced to significantly change our business plans and restructure our operations to conserve cash, which would likely involve some, combination, or all of the following:

- Out-license or sell some or all of our intellectual, technological, and/or tangible property not presently contemplated and at terms that we believe would not be favorable to us;

- Reduce the size of our workforce, including the number of our scientific personnel;

- Reduce the scope and nature of our research and drug development activities including the possible termination of clinical trials; and

- Terminate operating leases and other contractual arrangements.

Although no assurance can be given, we believe that we can continue to operate as a going concern and, accordingly, our consolidated financial statements have been prepared assuming that we will continue as a going concern. Consequently, our consolidated financial statements do not include adjustments relating to the recoverability and classification of asset carrying amounts or the amount and classification of liabilities that would be required if we were not able to continue as a going concern.

Principles of Consolidation

Our consolidated financial statements include our accounts including those of our wholly owned and majority owned subsidiaries. We eliminated all significant intercompany accounts and transactions.

Cash and Cash Equivalents

Cash and cash equivalents consist of cash and highly liquid investments of commercial paper and demand notes with original maturities of 90 days or less.

Marketable Securities and Short-Term Investments

We classify investments in debt and equity securities among three categories: held-to-maturity, trading, and available-for-sale. As of December 31, 2001, all of our debt and equity securities holdings were categorized as

available-for-sale. We carry available-for-sale securities at fair value, with unrealized gains and losses included as a component of accumulated other comprehensive income (loss) in stockholders' equity. We use quoted market prices to determine the fair value of these investments.

Prepaid Expenses and Refundable Deposits

Prepaid expenses are deferred and later recorded as an expense during the period benefited. Deposits are expected to become refundable at a later date.

Property and Equipment Purchased or Leased

We carry property and equipment at historical cost, less accumulated depreciation and amortization. When property and equipment are disposed of, the related cost and accumulated depreciation are removed from the accounts and

any resulting gain or loss is reflected in income. Depreciation and amortization are computed using the straight-line method over the following estimated useful lives:

Equipment	5 to 7 years
Leasehold Improvements	The shorter of the estimated useful life or lease term

Research and Development

We expense all research and development activity costs in the period incurred.

Stock-Based Compensation

We account for all of our stock based compensation in accordance with SFAS No. 123, "Accounting for Stock-Based Compensation" (or SFAS 123) that encourages companies to recognize stock based compensation using a fair market value methodology. Under SFAS 123, the fair value of a stock option (or its equivalent) granted by a public entity shall be estimated using an option-pricing model (for example, the Black-Scholes or binomial model) that takes into account certain assumptions. However, SFAS 123 permits continued use of accounting for employee stock based compensation using the intrinsic value methodology of accounting promulgated by Accounting Principles Board (or APB) Opinion No. 25, "Accounting for Stock Issued to Employees" (or APB 25). Under the intrinsic method, stock based compensation is measured as the excess, if any, of the quoted market price of our common stock at the measurement date over the exercise price.

We recognize non-employee stock based compensation or payments using a fair market value methodology promulgated by SFAS 123.

We recognize employee stock based compensation using the intrinsic value methodology promulgated by APB 25.

Basic and Diluted Net Loss Per Share

We calculate basic and diluted net loss per share using: the weighted average number of common shares outstanding and the net loss, less preferred stock dividends, during each year, respectively. We exclude all antidilutive common stock equivalents from the basic and diluted net loss per share

calculation.

Use of Estimates

We make certain estimates to prepare our financial statements that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and revenues and expenses reported during the reporting period. Actual results could differ from our estimates.

We have estimated that our current working capital plus funds raised or to be raised subsequent to year end will be sufficient for us to continue as a going concern and therefore have prepared the financial statements on that basis. That basis includes estimating future cash requirements of planned research & development activities and general and administrative requirements, the retention of key personnel, certain clinical trial results, maintained market need for our product candidates, and other major business assumptions. If these estimates prove to be wrong, we may not be able to continue as a going concern.

Revenue Recognition

We recognize revenue from each sale contract over each sale contract's operative life and after all contingencies related to us being due receipt of such revenue are eliminated.

Income Taxes

We recognize deferred tax assets and liabilities for the future tax consequences attributable to differences between the financial statement bases and tax bases of existing assets and liabilities. We recorded a valuation allowance equal to our net deferred tax asset.

RESULTS OF OPERATIONS

From our inception in June 1987 through December 31, 2001, we have devoted our resources primarily to fund research and development, and incurred a cumulative net loss of approximately $124.1 million. During this period, we had insignificant revenues from grants and licensing fees.

Separate segment information is presented for our pharmaceutical business and functional genomics business.

Pharmaceutical Business

We had no revenues during each year in the three-year period ended December 31, 2001.

The decrease in research and development expense during 2001 was due primarily to us internally managing the majority of our clinical trials instead of using more expensive outside clinical research organizations. However, for that purpose, additional expenses from an increase in personnel, consultants and office space rent offset a portion of this decrease. The most significant clinical trials we conducted during 2001 were a pivotal phase 2 clinical trial for Neotrofin in Alzheimer's disease, other Neotrofin clinical trials for other neurology indications, and Neoquin, in the United Kingdom, for the treatment of bladder cancer. We also incurred additional research and development expenses to

broaden our pharmaceutical platform base and further development of new drug candidates, including activities to secure drug supplies and to prepare clinical protocols for satraplatin, and the identification of compounds in our psychosis platform. Overall during 2001, research and development expenses increased in the category of salaries due to additional personnel, salary increases and related benefits, increases in pre-clinical expenses related to broadening our pharmaceutical platforms, and increases in consulting expenses primarily due to internally managing the majority of our clinical trials. Research and development expenses increased during 2000 and 1999 due primarily to accelerated clinical and pre-clinical trials to commercialize Neotrofin. These expenses were due primarily to the increased number and length of our clinical trials and manufacturing and formulation of drug compound, all of which were conducted by outside organizations. Internally, research and development expenses increased in the category of salaries due to additional personnel, salary increases and related benefits. In addition, during 1999, we began allocating a higher proportionate share of overall rent expense to research and development as a result of research and development utilizing a higher proportion of our primary Irvine facility.

The increases in general and administrative expense in 2001, 2000 and 1999 were each due primarily to increases in personnel, salary increases and related benefits, recruiting, relocation, travel and depreciation and amortization. In addition, we paid a break-up penalty fee of approximately $405,000 in 2001 related to the cancellation of the first debenture tranche of $10 million under the April 17, 2001 financing and we incurred approximately $610,000 in investment banking consulting services expense in exchange for warrants to purchase shares of our common stock. In addition, 1999 expenses increased due to increases in investor relations expense, regulatory agency fees and licenses, and printing expense, offset by a lower proportionate share of overall rent expense to general and administrative as a result of general and administrative utilizing a lower proportion of our primary Irvine facility.

We settled a single litigation matter in 1999 that resulted in a non-recurring, non-cash expense of approximately $2.5 million by issuing shares of NeoTherapeutics common stock.

The decrease in interest income during 2001 was due to lower average balances in our investment accounts offset slightly by higher interest rates on our investments. The increase in interest income in 2000 was due primarily to a full year utilization of invested funds. The decrease in interest income in 1999 was due to lower average balances in our investment accounts. The decrease in interest expense during 2001 was due primarily to the non-recurrence of a non-cash charge incurred in 2000 of approximately $1.6 million of amortization of debt discount and issuance costs associated with convertible debt that was issued and converted into common stock during 2000, partially offset by an increase in interest expense associated with capital lease obligations due to higher interest rates and a higher average lease obligation balance. Interest expense in 1999 increased primarily due to interest expense associated with a higher average lease obligation balance.

Functional Genomics Business

Revenue was approximately $41,000 during 2001 primarily from recognizing deferred licensing fees earned during 2001 from Pfizer, Inc. and from a single product sale. We did not have any revenue during 2000 or 1999.

The increase in research and development expense during 2001 was due primarily to a continued ramp up of operations in 2001 versus a year of beginning operational ramp-up, organizing and strategizing in 2000. The year 2001 included a significant increase in personnel that increased salary and related benefits and other expenses, offset slightly by a decrease in consulting expense. Additionally, we occupied new facilities under a sub-lease that

commenced in June 2001. Under our new sub-lease agreement, we paid for approximately 85% of the expenses of the new facility (see "Properties" for the significant terms of this sub-lease agreement). Prior to 2001, we had no direct occupancy expense related to our functional genomics business. The increase in research and development during 2000 was due primarily to activities associated with beginning operating and continued organizing and strategizing the functional genomics business that included an increase in personnel that increased salary and related benefit and other expenses, an increase in consulting

expense, and an approximate $400,000 increase in research grants paid. In 1999, research and development expenses consisted primarily of salaries and related benefit and other expenses, research grants of approximately $150,000, and other costs associated with the start up of our functional genomics business.

A significant portion of the general and administrative expense incurred by the functional genomics business is allocated from NeoTherapeutics to NeoGene. The increase in general and administrative during 2001 was due primarily to a continued ramp up of operations in 2001 versus a year of beginning operational ramp-up, organizing and strategizing in 2000. 2001 included a significant increase in the allocation of administrative personnel costs from NeoTherapeutics to NeoGene due to the hiring of executive and administrative personnel primarily at NeoTherapeutics that increased salary and related benefits and other expenses. Additionally, our new sub-lease agreement and the fact that we paid for approximately 85% of the expenses under the sub-lease during 2001 caused an increase in occupancy expense (see "Properties" for the significant terms of this sub-lease agreement). The increase in general and administrative expense during 2000 was due primarily a ramp up of organizational activity requiring an increase in the allocation of administrative personnel costs from NeoTherapeutics to NeoGene that increased salary and related benefits and other expenses. General and administrative expenses during 1999 were primarily allocated salary expenses associated with the start up of our functional genomics business.

The increase in interest income during 2001 and 2000 was due to higher average investment balances. In the fourth quarter of 2000, we sold approximately $7 million in convertible preferred stock in our NeoGene subsidiary most of which we purchased back in the third quarter of 2001. We had no interest income during 1999. We had no interest expense during 2001, 2000 or 1999.

FINANCIAL CONDITION

General

At the present time, our business does not generate cash from operations needed to finance our short-term operations. We will rely primarily on (a.) raising funds through the sale of our securities including under our Sales Agreement with Cantor Fitzgerald & Co., which is on a "best-efforts" basis, and/or (b.) out-licensing our technology, to meet all of our short-term cash needs. We have generated operating losses since our inception and our existing cash and investment securities, including net cash proceeds of $5.8 million raised in March 2002, are not sufficient to fund our current planned pharmaceutical and functional genomics operations for the next 12 months. Therefore, we will need to seek additional funding by the end of July 2002, or sooner, through public or private financings, including equity financings, and through other arrangements to continue operating our businesses. As has been stated by our independent public accountants in their opinion, our current

financial position raises substantial doubt as to our ability to continue as a going concern.

The results of a clinical trial on our lead drug candidate Neotrofin should be available during the second quarter of 2002. If the results of this trial are sufficiently positive, we expect to be able to raise the capital necessary to fund our currently planned pharmaceutical and functional genomics operations. Additionally, we anticipate that our long-term business plans require that we enter into collaborative partnership agreements and strategic alliance agreements with larger pharmaceutical companies to co-develop, manufacture and market our product candidates. If the results of this trial are negative (or not sufficiently positive), we may not be able to raise additional funds on favorable terms, if at all. Accordingly, we would be forced to significantly change our business plans and restructure our operations to conserve cash, which would likely involve some, combination, or all of the following:

- Out-license or sell some or all of our intellectual, technological, and/or tangible property not presently contemplated and at terms that we believe would not be favorable to us;
- Reduce the size of our workforce, including the number of our scientific personnel;
- Reduce the scope and nature of our research and drug development activities including the possible termination of clinical trials; and
- Terminate operating leases and other contractual arrangements.

Although no assurance can be given, we believe that we can continue to operate as a going concern and, accordingly, our consolidated financial statements have been prepared assuming that we will continue as a going concern. Consequently, our consolidated financial statements do not include adjustments relating to the recoverability and classification of asset carrying amounts or the amount and classification of liabilities that would be required if we were not able to continue as a going concern.

2001 Cash Flow Activities

At December 31, 2001, we had working capital of approximately $2.8 million that included cash and equivalents of approximately $0.7 million and short-term investments of approximately $6.4 million. In comparison, at December 31, 2000, we had working capital of approximately $7.2 million that included cash and cash equivalents of approximately $6.2 million and short-term investments of approximately $5.3 million. The $4.4 million decrease in net working capital during

the year ended December 31, 2001 is attributable primarily to the loss of $27.9 million, less non-cash compensation and other items of approximately $2.8 million, less changes in operating assets and liabilities of $0.2 million, plus the purchase of Series A Preferred Stock of NeoGene for $5.5 million and 7% Series C Preferred Stock of NeoTherapeutics for $0.3 million and equipment purchases of $1.4 million and payments on capital lease obligation of $0.7 million, partially offset by the sale of approximately $28.4 million of our common stock.

Historical Funding

We historically financed our operations primarily through sales of securities, borrowings, grants and deferred payment of salaries and other expenses from related parties.

During 1993, we issued 40,000 shares of common stock at the fair market value on the date of issuance of $1.35 per share to a financial consultant in exchange for $54,000 of investment banking services.

During 1994, we sold 13,000 shares of restricted common stock at $2.50 per share through a private placement for $32,500 in cash to three investors. During 1995, we sold 22,000 shares of restricted common stock at $2.50 per share through a private placement for $55,000 in cash to six investors. During 1996, we sold 266,800 shares of restricted common stock at $2.50 per share through a private placement for $633,650 in cash.

In June 1996, we filed a registration statement with the Securities and Exchange Commission offering to the public 2,500,000 units (or the Units). Each Unit consisted of one share of our common stock and one warrant to purchase one share of our common stock. The registration statement became effective on September 26, 1996, and on October 1, 1996, we sold all of the Units in exchange for $17,363,003 in cash proceeds, net of public offering costs. On October 11, 1996, the principal underwriter of the offering exercised a portion of its overallotment option and purchased from us 200,000 Units in exchange for $1,389,280 in cash, net of transaction costs. The Units separated immediately following issuance and the common stock and warrants that made up the Units traded as separate securities. The warrants expired in September 2001.

On March 27, 1998, we executed a $15 million Private Equity Line of Credit Agreement (the "Equity Line Agreement") with a private investor that provides for minimum and maximum puts ranging from $250,000 to $2.0 million, depending on our stock price and trading volume. At the time of each put, the investor receives a discount of 12% from the then current average market price, as determined under the Equity Line Agreement. Pursuant to the Equity Line Agreement, we also issued to the investor warrants to purchase 25,000 shares of our common stock at an exercise price of $11.62 per share. Under the Equity Line Agreement, we received proceeds of approximately $3.55 million from sales of 506,049 shares of our common stock in 1998, $1.95 million from sales of 211,393 shares of our common stock in 1999, and during January 2000, we received $2.0 million from the sale of 186,961 shares of our common stock. The agreement expired in February 2001.

On August 31, 1998, certain of our officers and directors exercised non-qualified stock options and purchased 62,000 shares of our common stock. The exercise price of the stock options was at $4.50 per share for 50,000 shares and $5.13 per share for 12,000 shares for an aggregate purchase price of $286,560, represented by notes issued by the purchasers. The notes are full recourse promissory notes bearing interest at 7% per annum, and are collateralized by the stock issued upon the exercise of the stock options. Interest and principal are payable two years after the issue dates. The notes are included as a component of equity in the financial statements.

On May 31, 1999, we sold to a group of private investors 400,000 shares of our common stock for $4.0 million in cash. The investors also received five-year warrants to purchase 80,000 shares of our common stock at an exercise price of $15 per share.

On July 27, 1999, we completed a secondary public offering and sold 1,150,000 shares of our common stock, including the underwriters' overallotment, for $8.7 million in cash, net of offering costs.

On November 30, 1999, we sold to two private investors, 845,594 shares of our common stock, for $9.4 million in cash, net of offering costs, and warrants to purchase 126,839 shares of our common stock at $14.24 per share. Based on a reset formula contained in the agreement, in March 2000 we issued to the investors 43,383 additional shares of our common stock for no additional consideration. The investors waived a second reset as partial consideration under a different financing transaction.

On December 15, 1999, we entered into a settlement agreement for a previous litigation matter. Under the terms of the settlement, the shareholder forfeited 678,835 shares of common stock and warrants valued at $1,697,090 and we issued 332,630 shares of commons stock and warrants valued at $4,155,449. We charged the difference of $2,456,359 to operations.

On February 25, 2000 we sold to two private investors 520,324 shares of our common stock for $8.0 million in

cash. The investors also received five-year warrants to purchase 104,000 shares of our common stock at the price of $21.00 per share.

On April 6, 2000, we entered into a financing transaction with two private investor groups. The transaction consisted of (a) $10 million in 5% subordinated convertible debentures due April 6, 2005, (b) redeemable warrants to purchase up to 4 million shares of our common stock over a two year period and (c) five-year warrants to purchase from 115,000 shares up to 265,000 shares of our common stock at an exercise price of $19.67 per share. The redeemable warrants can be redeemed in part by us as frequently as several times per week, subject to average daily volume restrictions and if the market price of our common stock is above $5.00 per share and, when called for redemption, can be exercised by the investor at 97% of the per share closing market price (i.e., a discount of 3%) and are exercisable at the sole option of the investors at the price of $33.75 per share. During 2000, the investor converted the $10 million of debentures into 1,555,409 shares of our common stock plus 38,768 shares of our common stock in payment of accrued interest. Also in 2000, we called and the investors exercised 586,400 of our redeemable warrants for 586,400 shares of our common stock in exchange for $5,120,654 in cash. At both December 31, 2000 and 2001, there were 3,413,600 redeemable warrants outstanding. The warrants expire in June 2002.

On May 1, 2000 we completed a private placement of 500,000 shares of our common stock for $7.0 million in cash. The investors also received five-year warrants to purchase 125,000 shares of our common stock at an exercise price of $17.50 per shares.

On September 21, 2000, we sold 111,110 shares of Series A convertible preferred stock of our majority owned subsidiary, NeoGene, for $5 million and a five-year warrant to purchase up to (i) 80,000 shares of our common stock at an exercise price of $10.47 per share and (ii) 22,676 shares of NeoGene common stock at an exercise price of $45.00 per share. The fair market value of the warrant was estimated at $411,040 on the date of issuance using the Black-Scholes option pricing model with the following assumptions: dividend yield of 0 percent; expected volatility of 74.97 percent; risk free interest rate of 6.01 percent; and an expected life of five years. The fair value of the warrant was estimated at $540,301 on the date of issuance using the Black-Scholes option pricing model with the following assumptions: dividend yield of 0 percent; expected volatility of 74.97 percent; risk free interest rate of 5.93 percent; and an expected life of three years. On August 13, 2001, NeoTherapeutics purchased the Series A Preferred Stock of NeoGene for $5.5

million representing the $5.0 million face value of the preferred stock plus a $500,000 redemption fee. The difference of approximately $0.8 million between the book value of the preferred stock and the amount paid was recorded as a charge to accumulated deficit. We also paid accrued dividends of approximately $220,000 to the holders of the preferred stock.

On September 29, 2000, we entered into an agreement to sell 968,524 shares of our common stock to two private investors for $8 million cash and a five-year warrant to purchase 193,706 shares of our common stock at $10.13 per share. The fair value of the warrant was estimated at $847,657 on the date of issuance using the Black-Scholes option pricing model with the following assumptions: dividend yield of 0 percent; expected volatility of 74.97 percent; risk free interest rate of 5.88 percent; and an expected life of five years. The agreement contains a reset formula which provides for the investor to obtain at nominal cost, additional shares of our common stock based on the market price of our common stock determined thirty and sixty days after the effective date of the registration statement to be filed for this transaction. On January 30, 2001, the first vested period ended which resulted under the reset formula in the issuance of 1,070,336 shares of our common stock to the investors. As part of the April 17, 2001 transaction described below, we agreed to issue an additional 900,000 shares of our common stock to the investors under the second and final reset under the agreement. We received no proceeds upon the investors' exercise of the resets.

On December 18, 2000, we entered into an agreement between our majority owned subsidiary, NeoGene, and an institutional investor for the issuance and sale of NeoGene Series B convertible preferred stock and warrants for aggregate consideration of $2.0 million. Under the provisions of the agreement, we issued and sold to the investor a total of 44,445 shares of NeoGene Series B Convertible Preferred Stock, at a purchase price of $45 per share, and issued a five-year warrant to purchase a total of 9,387 shares of NeoGene common stock, at an exercise price of $45 per share. The fair value of the warrant was estimated at $250,351 on the date of issuance using the Black-Scholes option pricing model with the following assumptions: dividend yield of 0 percent; expected volatility of 88.96 percent; risk free interest rate of 5.14 percent; and an expected life of three years. The investor also received a five-year warrant to purchase an aggregate of 30,000 shares of our common stock, at an exercise price of $6.10 per share. The fair value of the warrant was estimated at $101,700 on the date of issuance using the Black-Scholes option pricing model with the following assumptions: dividend yield of 0 percent; expected volatility of 88.96 percent; risk free interest rate of 5.10 percent; and an expected life of five years. We also granted an exchange right to the investor that will allow the investor to exchange its shares of NeoGene Series B Preferred for our preferred stock. The exchange right grants the investor the right, at its option, at any time and from time to time after June 18, 2001, to exchange all or a portion of the NeoGene Series B Preferred shares then held by the investor for a number of shares of our designated convertible preferred stock. In June 2001, the investor exercised its right to exchange all of the NeoGene Series B Preferred stock then held by the investor for 200 shares of our 7% Series C

convertible Preferred stock. Under the terms of the exchange right, the investor forfeited 4,693 or 50% of the previously granted five-year warrants to purchase shares of NeoGene common stock at an exercise price of $45 per share. The shares of our 7% Series C Preferred Stock were redeemable, under certain conditions at the option of the holder, and each share is convertible into a number of shares of our common stock equal to $10,000 divided by the lesser of (i) 100% of the average of the lowest seven closing bid prices of our common stock in the previous 30 trading days, or (ii) $5.97. In August 2001, the holder of our 7%

Series C Preferred Stock converted 170 shares of our 7% Series C Preferred Stock into 485,591 shares of our common stock. In September 2001, we purchased the remaining 30 shares of our 7% Series C Preferred Stock for $300,000 plus accrued dividends and a settlement fee of approximately $72,000. The 30 shares of our 7% Series C Preferred Stock are recorded as an offset to Stockholders' Equity.

2001 Fundings and Other Related Events and Information

We financed our 2001 business operations primarily through sales of securities.

On January 2, 2001, we filed with the Securities and Exchange Commission a "shelf" registration statement permitting the sale of our securities with a maximum aggregate public offering price of $50 million. At March 22, 2002, approximately $10 million remained available for sale under the registration statement.

On July 2, 2001, we filed with the Securities and Exchange Commission a registration statement permitting the sale by us, from time to time, of up to $8.4 million of our common stock directly into the public trading market for our common stock. The common stock sold pursuant to this registration statement will be offered through an underwriter engaged by us on a "best efforts" basis. At March 27, 2002, approximately $8 million remained available for sale under the registration statement.

On April 6, 2001, in a special meeting, our stockholders approved an increase in authorized common stock from 25 million to 50 million shares.

There were 26,876,951 issued and outstanding shares of our common stock as of March 22, 2002. In addition, security holders held options and warrants as of March 22, 2002 which, if exercised, would obligate us to issue up to an additional 11,068,822 shares of common stock, of which 3,913,693 shares are subject to options or warrants which are currently exercisable at the sole election of the holder. A substantial number of those shares, when issued upon exercise, will be available for immediate resale in the public market.

During 2001, we raised $28.3 million and issued 9,979,340 shares of our common stock through the following transactions:

- On January 25, 2001, we issued to a vendor in settlement of our obligation to them, 50,000 shares of our common stock and a five-year warrant to purchase 50,000 shares of our common stock at $3.50 per share.

- On January 30, 2001, we issued to two investors 1,070,336 shares of our common stock under the first reset provision contained in the adjustable warrants issued in connection with the September 29, 2000 sale of 968,524 shares of our common stock for $8 million. On May 15, 2001 we also issued an additional 900,000 shares of our common stock to the two investors in respect of the second and final reset provision. We did not receive any consideration as a result of issuing shares of our common stock pursuant to the reset provisions of this financing transaction. The reset provisions were part of an earlier sale of our common stock and were previously accounted for as a partial allocation of the proceeds of that sale to common stock. As such, no further accounting was necessary on the date the reset provision was exercised.

- On February 2, 2001, we sold 1,627,756 shares of our common stock under the shelf registration statement to a private investor for $3.5 million in cash.

- On March 8, 2001, we sold 1,250,000 shares of our common stock under the shelf registration statement to a private investor for $5 million in cash. The investor also received five-year warrants to purchase up to 125,000 shares of our common stock at the exercise price of $5.00 per share.

- On April 17, 2001, we entered into a financing transaction with two private investor groups which provide, among other things, for (a) the sale of 1,176,472 shares of our common stock under the shelf registration statement for $6.0 million cash, (b) an option to place with the investor groups two tranches of convertible debenture notes of $10 million and $8 million within approximately 30 days and seven months

of the initial closing, respectively, at our option, and (c) five-year warrants exercisable at 125% of the market price of the date of the respective closing of each of the aforementioned debenture issuances for a number of shares equal to 20% of the number of shares into which the debentures are initially convertible. We did not exercise the first option for the debenture tranche of $10 million and paid a break-up fee of $405,000 in July 2001, pursuant to the terms of the financing transaction of May 17, 2001. This fee was charged to general and administrative expense in the second quarter of 2001. On November 13, 2001, we decided not to exercise the second option for the debenture tranche of $8 million, pursuant to the April 17, 2001 financing transaction, as amended.

- On May 17, 2001, we sold to the aforementioned two private investor groups 1,400,000 shares of our common stock under the shelf registration statement for $5.95 million in cash. The investors also received five-year warrants to purchase up to 280,000 shares of our common stock at an exercise price of $6.00 per share.

- On June 22, 2001, we sold to our employees through our Employee Stock Purchase Plan (or ESPP), 40,390 shares of our common stock for approximately $90,100. Pursuant to the ESPP, the shares were sold at a 15% discount to market on the date of purchase.

- On August 14, 2001, we sold 600,000 shares of our common stock under the shelf registration statement to an institutional investor for $2,010,000.

- On June 12, 2001, we entered into two securities sales agreements with an investment banking firm acting as an underwriter to sell our common stock on a "best efforts" basis with the maximum aggregate public offering price under both agreements combined of $33.4 million. The securities were offered as part of a Controlled Equity Offering, or CEO(SM). Under one of the sales agreements, we may sell up to $8.4 million of our common stock "at the market" or directly into the established trading market for our common stock. Under the other sales agreement, we may sell up to $25 million of our common stock in any manner other than "at the market". Under

each agreement, if we and the underwriter agree to sell our common stock on certain terms, the underwriter will use its commercially reasonable efforts to sell our securities up to the amount agreed upon, but will not be required to sell any specific number or dollar amount of our securities. The net proceeds from the sales will be the aggregate sales price at which our securities were sold after deduction for the underwriter's commission/discount of up to 4%. We will issue to the underwriter five-year warrants to purchase shares of our common stock in an amount equal to 10% of the number of shares of common stock sold by us pursuant to the offering at an exercise price per share equal to 130% of the volume weighted average price at which such shares were issued. On October 19, 2001, we and the investment banking firm executed amendments to the sales agreements previously entered into by the investment banking firm and us on June 12, 2001, and to the advisory agreement previously entered into on April 11, 2001 and amended on June 12, 2001. The amendments relate primarily to modifications of the compensation provisions of the sales agreements. Through placement notices under each sales agreement, during October and November of 2001, 949,710 shares of our common stock were sold pursuant to the $25 million sale agreement for aggregate cash proceeds of $3.8 million and approximately 124,800 shares of our common stock were sold pursuant to the $8.4 million sale agreement for aggregate cash proceeds of $0.4 million.

- On December 10, 2001, we sold to certain institutional investors 519,480 shares of our common stock under the shelf registration statement for cash proceeds of approximately $2.0 million.

- On December 13, 2001, under a second placement notice related to the aforementioned $25 million sales agreement, we sold 246,883 shares of our common stock for aggregate cash proceeds of approximately $1.0 million.

- On December 21, 2001, we sold to our employees through our Employee Stock Purchase Plan (or ESPP), 23,513 shares of our common stock for $67,953. Pursuant to the ESPP, the shares were sold at a 15% discount to market on the date of purchase.

We also entered into the following financing transactions in March 2002:

- On March 12, 2002, we sold 2,575,000 shares of our common stock at $2.00 per share for $5.15 million

of gross cash proceeds off of our shelf registration statement. The investors also received warrants to purchase up to 643,750 shares of our common stock at an exercise price of $2.75 per share. Offering costs of this transaction were approximately $230,000.

- On March 15, 2002, we sold 525,000 shares of our common stock at $2.00 per share for $1.05 million of gross cash proceeds

off of our shelf registration statement. The investors also received warrants to purchase up to 131,250 shares of our common stock at an exercise price of $2.75 per share. Offering costs of this transaction were approximately $130,000.

During 2001, we contracted two functional genomics' technology out-licensing agreements with Pfizer, Inc. and received initial cash payments aggregating $300,000.

RELATED PARTY TRANSACTIONS

During 1987 and 1988, Alvin J. Glasky, Ph.D., our Chief Executive Officer (or CEO) who is also a major stockholder of ours, loaned a total of $270,650 to us for working capital purposes, of which $250,000 plus $2,000 of accrued interest was canceled in December 1988 in exchange for the issuance of 28 Revenue Participation Units (or RPU's). The RPU's were converted into 112,000 shares of our common stock.

From 1989 through 1993, we borrowed an additional $757,900 from Dr. Glasky, which, together with accrued interest of $300,404, aggregated $1,058,304 on December 31, 1993, at which time we issued 200,000 shares of common stock to Dr. Glasky in exchange for cancellation of $500,000 of loans made to us. The remaining $257,900 in principal and $300,404 of accrued interest were converted to a $558,304 promissory note which, as amended from time to time, is currently unsecured, and is payable upon demand. Interest is payable monthly at the annual rate of 9%. The note was partially repaid in 2000 when we advanced cash to Dr. Glasky to pay payroll taxes arising from his exercise of a warrant for 88,173 shares of common stock at $3.75 per share in August 2000. The note was partially repaid in 2001. The note balance at December 31, 2001 was $135,574.

Assignment of Patents by Chief Executive Officer

Dr. Glasky assigned to us all of his rights in nine patents. In connection with the assignment of these patents to us, we entered into royalty agreements with Dr. Glasky (or CEO Agreements), which expire concurrently with the expiration of the underlying patents and any additional patents derived from the underlying patents. Under each of the CEO Agreements, as amended, we are obligated to pay Dr. Glasky a royalty of two percent (2%) of all revenues derived by us from the use and sale by us of any products or methods included in the patents. Further, in the event that we terminate Dr. Glasky's employment without cause, the royalty rate under each CEO Agreement will increase from two percent (2%) to five percent (5%). Finally, in the event of Dr. Glasky's death, the family or estate is entitled to continue to receive under each CEO Agreement royalties at a rate of two percent (2%) for the duration of the respective CEO Agreement.

McMaster University Agreement

On July 10, 1996, we entered into a license agreement with McMaster University (or McMaster) that allows us the use of certain technologies developed by McMaster covered in the patents filed jointly by us and McMaster (US Patent Nos. 5,447,939, 5,801,184, 6,027,936, 6,338,963, and 6,350,752), all of which are also encumbered by CEO Agreements. Under the agreement, we paid a one time licensing fee of $15,000 and are obligated to pay to McMaster an annual royalty of five percent (5%) on net sales of products containing compounds developed by McMaster. In July 1997, we began, and have continued making, annual minimum royalty payments of $25,000.

Director and Officer Notes for the Exercise of Equity Instruments

We made loans to certain of our directors and officers for the exercise of stock options or the purchase of stock. We loaned $286,560 in 1998, and

$435,649 in 2000. During 2000, one individual paid $61,560 back to us and during 2001, in connection with the settlement of a litigation matter, we forgave a $45,000 note to one individual. At December 31, 2001, $615,649 remained due to us from directors and officers for the purchase of shares of common stock or the exercise of stock options. These notes accrue interest at rates between 7% and 9% and are classified as an offset to stockholders' equity.

CONTRACTUAL AND COMMERCIAL OBLIGATIONS

Debt and Capital Leases

In September 1998, we entered into a Master Note and Security Agreement (or the Note) with a finance company affiliated with our bank whereby we borrowed $1.5 million under the Note for equipment and computer software purchases. Borrowings are collateralized by substantially all of our assets, exclusive of our patents and other intellectual properties. The note requires monthly repayments of $41,277, bears interest at approximately 12% and is due March 2002, at which time a final principal installment of $150,000 is due. We have also granted to the finance company a warrant to purchase up to 13,459 shares of our common stock at $7.43 a share which was valued at $45,000 using the Black-Scholes option-pricing

model with the following assumptions: Risk-free interest rate of 5.02 percent; expected life of three years; expected volatility of 75.3 percent. The warrant was recorded as a prepaid expense and is being amortized using the effective interest method over the life of the note.

In September 2000, we financed the premium amounting to $322,000 for a three-year insurance policy through a borrowing from the insurer. The loan was payable through August 2001 in monthly installments of $30,556 including principal and 8.57% annual interest. At December 31, 2000, approximately $210,000 related to this note was classified on the balance sheet as accrued expenses.

On September 22, 2000 we signed an agreement to lease up to $2.5 million in equipment from a major equipment leasing and remarketing company (or lessor). Under the terms of the agreement, we can draw up to $2.5 million through September 2001 and are required to make quarterly payments over three years on cumulative advances drawn by us. We drew a total of $1,029,381 under the lease agreement. The lease is collateralized by the underlying equipment. At the conclusion of the lease term, the equipment may be purchased for fair value at that time, re-marketed by the lessor, or re-leased by us.

In October 2000, we financed $151,249 of laboratory equipment through an equipment vendor under a capital lease agreement. Under the terms of the agreement, we are required to make monthly payments of $4,839 over three years, including effective interest at approximately 9% per annum.

Future installments of debt principal on capital lease obligations are as follows:

Year Ending December 31:	Amount
2002	$ 654,434

2003	315,355
2003	148,350
	$1,118,139

Additionally, under our current capital lease obligations arrangements, we will be obligated to pay approximately $69,000 in interest.

Facility, Property and Equipment Operating Leases

We lease certain facilities for our research and development and administrative functions and its subsidiaries. Certain leases also require scheduled annual fixed rent increases, payments of property taxes, insurance and maintenance. Our functional genomics segment sub-leases a facility from its collaboration partner (see "Joint Venture" below) that requires us to pay 50% of the lease payments plus any shortfall by our collaboration partner. In 2001, we paid approximately 85% of the minimum lease requirements under this lease representing a contingent rental incurred in excess of our 50% commitment of approximately $102,000 in 2001. The minimum lease requirements below include 100% of the minimum lease requirements to be made under this lease. In addition, we lease certain office and telephone equipment under non-cancelable operating leases.

Minimum lease requirements for each of the next five years and thereafter under the property and equipment leases are as follows:

Year ending December 31:	Amount
2002	$ 1,049,400
2003	944,200
2004	681,600
2005	405,800
2006	171,500
	$ 3,252,500

Research and Fellowship Grants

At December 31, 2001, we had committed to pay approximately $419,000 during 2002 and an aggregate of approximately $528,000 from 2003 through 2005, principally to the University of California, Irvine to conduct general scientific research programs.

Joint Venture

In September 1999, we entered into a three-year joint venture agreement with the University of California, Irvine (or UCI) to assist in the marketing and commercialization of discoveries made by certain members of its functional genomics science department. We are obligated under the agreement to fund the joint venture for three years with minimum payments of $2.0 million over the life of the agreement. As of December 31, 2001 no obligation remains under this minimum obligation. The agreement is cancelable by either UCI or us upon giving thirty days notice. We have the right of first refusal to acquire the licensing rights to any new discoveries and UCI retains ownership rights to all discoveries under the agreement.

FINANCIAL MARKET RISKS

We are exposed to certain market risks associated with interest rate fluctuations and credit risk on our marketable securities and borrowing arrangements. All investments in marketable securities and borrowing arrangements are entered into for purposes other than trading. Our primary objective of our investment activities is to preserve principal while at the same time maximizing yields without significantly increasing risk. We do not utilize hedging contracts or similar instruments.

Our investments during 2001 and as of December 31, 2001 are fixed rate, short-term corporate and government notes and bonds, which are available for sale. Because the interest rates are fixed, changes in interest rates affect the fair value of these investments but do not affect the interest earnings. Because these financial instruments are considered "available for sale," all changes in fair value is recorded in stockholders' equity as "Unrealized (losses) gains on available-for-sale securities" until the investment is either sold or matures, at which time the gain or loss, if any, is recognized as a realized gain or loss in the statement of operations. If a 10% change in interest rates were to have occurred on December 31, 2001, any decline in the fair value of our investments would not be material. In addition, we are exposed to certain market risks associated with corporations' credit ratings of which we have purchased corporate paper (or bonds). If these companies were to experience a significant detrimental change in their credit ratings, the fair market value of such corporate paper may significantly decrease. If these companies were to default on such corporate paper, we may lose part or all of our principal. We believe that we effectively manage this market risk by diversifying our corporate paper investments by purchasing a few bonds of many large, well known, companies in a variety of industries.

Our primary exposures relate to (1) interest rate risk on borrowings, (2) our ability to pay or refinance our borrowings at maturity at market rates, (3) interest rate risk on our investment portfolio, and (4) credit risk of the companies' bonds in which we invest. We manage interest rate risk on our investment portfolio by matching scheduled investment maturities with our cash requirements. We manage interest rate risk on our outstanding borrowings by using fixed rate debt. While we cannot predict or manage our ability to refinance existing borrowings and investment portfolio, we evaluate our financial position on an ongoing basis.

Our borrowings bear interest at fixed rates. Changes in interest rates affect the fair value of our borrowings, but do not have an impact on interest expense. Because of the relatively short-term nature of our borrowings, fluctuations in fair value are not deemed to be material.

BUSINESS OUTLOOK

You should read the following discussion of our business outlook together with the financial statements and the notes to financial statements included elsewhere in this report. This discussion contains forward-looking statements that reflect our plans, estimates and beliefs. Our actual results could differ materially from those anticipated in these forward-looking statements.

Pharmaceutical Business

We are near the end of a pivotal clinical trial for Neotrofin in Alzheimer's disease. This clinical trial should result in statistically significant data showing whether or not Neotrofin has efficacy in the treatment of Alzheimer's disease. It should also show whether or not Neotrofin has acute affect on certain sub-populations of patients that participated in the trial and, possibly provide insight into appropriate clinical study protocols for future clinical trials. The results of this trial should be known during the second quarter of 2002. We hope that the current pivotal trial will return positive results that will make the marketing of Neotrofin for the treatment of Alzheimer's disease come to fruition within two years. We believe that this drug candidate, with further development and study, will show efficacy for the treatment of Alzheimer's disease, however, our ability to do so may be limited or prevented if sufficient funds cannot be raised. However, if results from this clinical trial show that Neotrofin has no efficacy in the treatment of Alzheimer's disease, we will stop all trials of Neotrofin in Alzheimer's disease and focus all of our resources on other opportunities for this drug candidate and all of the other drug candidates that we have for the treatment of nervous system diseases and indications, and drug candidates for the treatment of certain cancer and related indications, all of which are discussed in "ITEM 1. BUSINESS" above.

The capital markets have historically perceived us as a "one-drug" company. Therefore, if the results of our pivotal trial for Neotrofin in the treatment of Alzheimer's disease show that Neotrofin is unsuccessful, our ability to raise additional capital will be significantly harmed. If this were to occur, we would likely engage in immediate restructuring activities under a board-approved operational restructuring plan, which would include, but would not be limited to (a) layoffs of a substantial number of our personnel, (b) reduction in the scope and nature of our research and development activities, and (c) termination of operating leases and other contractual arrangements. Although these measures would reduce our ongoing burn-rate, there would be certain up-front non-recurring cash costs incurred, including severance and other termination-related costs. However, our hope is that, in the event that Neotrofin is unsuccessful, the capital markets recognize the value in developing all of our drug candidates for our targeted diseases and indications; therefore, our ability to raise additional capital may not be harmed. We intend to continue to expand the number of our drug candidates and indications. If we are able to raise sufficient funds to proceed with our proposed pre-clinical and clinical work on all of our drug candidates, we believe that our pipeline of drug candidates will eventually produce outstanding company growth. There is a risk, however, notwithstanding the results from the Neotrofin pivotal trial, that our ability to raise capital will be limited and that we will be forced to engage in restructuring activities as discussed previously.

Our current pipeline consists of six drug candidates: Neotrofin(TM), AIT-034, NEO-339, Neoquin(TM), satraplatin, and elsamitrucin. We are currently developing these drug candidates for the treatment in Alzheimer's disease, spinal cord injury, Parkinson's disease, peripheral neuropathy, dementia and memory impairment associated with aging, mild cognitive impairment, cognition, stroke, schizophrenia, other neurodegenerative diseases, attention deficits, prostate cancer, ovarian carcinoma, bladder cancer, Non-Hodgkin's lymphoma, and radiation sensitization as it relates to radiation treatment for cancer. Currently, each of our drug candidates relates to life threatening diseases and

is novel in its treatment or indication; therefore, we hope for expedited regulatory approval, if appropriate. We believe that all of our proposed drug candidates, with sufficient funding, will eventually be marketed by us or with the assistance and leadership of a co-development partner.

We continue development of therapeutic technology that is novel in its treatment or indication. We are currently looking for additional cognitive enhancers both related to Neotrofin and AIT-034 and novel compounds. As previously noted, Neotrofin is in late stage development for the treatment of Alzheimer's disease and is being evaluated in spinal cord injury, Parkinson's disease and peripheral neuropathy in chemotherapy patients. Additionally, NEO-339 is our lead drug candidate for mild cognitive impairment and attention disorders. We also have additional compounds in evaluation for attention disorders. Similarly, we have a series of compounds for psychosis indications, including the NEO-356 series and other compounds, from which a lead candidate is in the process of being selected. In recent studies conducted by us, some of these compounds show favorable receptor affinity over psychosis drugs currently marketed. We hope that these compounds will eventually provide to people who suffer from schizophrenia, therapy that has improved efficacy and reduced side effects. We believe that we will market satraplatin initially for the treatment of prostate cancer and eventually other cancer types. We also believe that satraplatin will have better efficacy for the cancer indications contemplated than current platinum based drug therapy and that satraplatin will reduce the cost of treatment for certain cancer patients since it has proven oral bio-availability making it possibly a candidate for out-patient administration. We believe that Neoquin and elsamitrucin will both eventually be marketed for the treatment of bladder cancer and Non-Hodgkin's lymphoma,

respectively. In addition, Neoquin has the potential to become one of the first radiosensitizer drugs on the market and would improve the effectiveness of cancer related radiation treatment.

We currently lack sufficient funds and strategic alliances to complete our current business plans. We believe that our existing capital resources, including net cash proceeds of $5.8 million raised from the sale of our common stock in March 2002, will not be adequate to fund our capital needs for the next 12 months of operations at our current level. We do not know whether or not we will be able to secure sufficient new funds to continue our businesses for the next twelve months and whether such funds can be obtained in time before we will have to take other actions that we otherwise would not take, like selling certain or all of our intellectual property rights and restructuring our operations or a combination of these activities.

If we are able to secure sufficient new funds and are able to develop strategic alliances with other pharmaceutical businesses for co-development opportunities, we would expect that our operating expenses would increase over the next several years as we expand our research and development and commercialization activities and operations. We expect to incur significant additional operating losses for at least the next several years. We also expect that research and development expenses will increase as we expand our clinical trials on all of our drug candidates. Depending on the results of our ongoing and planned clinical trials for Neotrofin and other drug candidates and the outcome of the regulatory approval process, we will expand our marketing and manufacturing abilities as we approach commercializing each of our product candidates.

Functional Genomics Business

NeoGene believes and has proven during 2001 that it has the expertise to discover novel therapeutic targets. During 2001, we signed two contracts with Pfizer for out-licensing two of our G-protein-coupled receptor systems that we discovered.

Over the next twelve months, we anticipate that our first agreement with Pfizer, Inc. will reach at least one milestone, thereby triggering payments from Pfizer to NeoGene. In addition, the scope of this agreement may be expanded. The second Pfizer agreement, may also reach the first milestone during 2002. We anticipate that we will enter into additional agreements with pharmaceutical or biotechnology companies during 2002 whereby they would obtain rights to certain of the proprietary receptor/ligand systems we have discovered.

Additional types of agreements that we anticipate entering into this year are strategic alliances under collaborative research agreements whereby we will determine the natural ligands of a company's proprietary receptors. This type of agreement is anticipated to involve ongoing research funding for several years. We may also provide cell lines and clones to certain companies for compensation.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

See "ITEM 7 MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS", subheading "Financial market risks", above.

ITEM 8. FINANCIAL STATEMENTS

INDEX TO FINANCIAL STATEMENTS

REPORT OF INDEPENDENT PUBLIC ACCOUNTANTS

To the Board of Directors and Stockholders
of NeoTherapeutics, Inc.:

We have audited the accompanying consolidated balance sheets of NeoTherapeutics, Inc. (a Delaware corporation) and subsidiaries as of December 31, 2001 and 2000,

and the related consolidated statements of operations, stockholders' equity (deficit) and cash flows for each of the three years in the period ended December 31, 2001 and for the period from inception (June 15, 1987) to December 31, 2001. These consolidated 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 consolidated 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 consolidated financial statements referred to above present fairly, in all material respects, the financial position of NeoTherapeutics, Inc. and subsidiaries as of December 31, 2001 and 2000, and the results of its consolidated operations and its cash flows for each of the three years in the period ended December 31, 2001 and for the period from inception (June 15, 1987) to December 31, 2001, in conformity with accounting principles generally accepted in the United States.

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the financial statements, the Company has suffered recurring losses from operations and has a net capital deficiency that raise substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 1. The financial statements do not include any adjustments relating to recoverability and classification of asset carrying amounts or the amount and classification of liabilities that might result should the Company be unable to continue as a going concern.

Orange County, California
March 27, 2002

NEOTHERAPEUTICS, INC. AND SUBSIDIARIES
(A DEVELOPMENT STAGE ENTERPRISE)
CONSOLIDATED BALANCE SHEETS

	DECEMBER 31,	
ASSETS	2000	
CURRENT ASSETS:		
Cash and cash equivalents	$ 6,158,375	$
Marketable securities and short-term investments	5,311,215	
Other receivables	334,059	
Prepaid expenses and refundable deposits	418,010	

Total current assets	12,221,659	
PROPERTY AND EQUIPMENT, at cost:		
Equipment	3,412,932	
Leasehold improvements	1,853,227	
Accumulated depreciation and amortization	(1,850,076)	(
Property and equipment, net	3,416,083	
OTHER ASSETS - Prepaid expenses and deposits	53,242	
Total assets	$ 15,690,984	$ 1
LIABILITIES, MINORITY INTEREST AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Accounts payable and accrued expenses	$ 3,965,506	$
Accrued payroll and related taxes	265,383	
Note payable to related party	285,574	
Current portion of capital lease obligations	593,609	
Total current liabilities	5,110,072	
CAPITAL LEASE OBLIGATIONS, net of current portion	474,004	
OTHER NON-CURRENT LIABILITIES	86,532	
Total liabilities	5,670,608	
COMMITMENTS AND CONTINGENCIES (NOTE 10)		
MINORITY INTEREST IN CONSOLIDATED SUBSIDIARIES	7,280,111	
STOCKHOLDERS' EQUITY:		
Preferred Stock, par value $0.001 per share, 5,000,000 shares authorized:		
Issued and outstanding, none at December 31, 2000 and 2001	-	
Common Stock, par value $0.001 per share, 25,000,000 shares authorized:		
Issued and outstanding, 13,307,227 and 23,777,158 shares, respectively	13,307	
Additional paid in capital	101,169,912	13
Deferred compensation expense	(959,850)	(
Notes receivable from officers and directors	(660,649)	
Accumulated other comprehensive income	763	
Deficit accumulated during the development stage	(96,823,218)	(12
Total stockholders' equity	2,740,265	
Total liabilities, minority interest and stockholders' equity	$ 15,690,984	$ 1

The accompanying notes are an integral part of these consolidated balance sheets.

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NEOTHERAPEUTICS, INC. AND SUBSIDIARIES
(A DEVELOPMENT STAGE ENTERPRISE)
CONSOLIDATED STATEMENTS OF OPERATIONS

	YEARS ENDED DECEMBER 31,		
	1999	2000	2001
REVENUES:			
Grants	$ -	$ -	$
Licensing and other	-	-	41
	-	-	41
OPERATING EXPENSES:			
Research and development	20,057,687	38,766,884	20,611
General and administrative	3,465,443	5,106,812	7,579
Settlement of litigation	2,458,359	-	
	25,981,489	43,873,696	28,190
LOSS FROM OPERATIONS	(25,981,489)	(43,873,696)	(28,149
OTHER INCOME (EXPENSE):			
Interest income	199,267	776,348	693
Interest expense	(243,410)	(1,857,640)	(129
Other income (expense)	35,727	(8,702)	(200
Total other income (expense)	(8,416)	(1,089,994)	363
NET LOSS BEFORE MINORITY INTEREST IN CONSOLIDATED SUBSIDIARIES	(25,989,905)	(44,963,690)	(27,786
MINORITY INTEREST IN CONSOLIDATED SUBSIDIARIES' NET LOSS	-	(1,463,597)	(48
NET LOSS	$ (25,989,905)	$ (46,427,287)	$ (27,834
BASIC AND DILUTED LOSS PER SHARE	$ (3.68)	$ (4.37)	$ (
BASIC AND DILUTED WEIGHTED AVERAGE COMMON SHARES OUTSTANDING	7,105,041	10,629,408	19,674

The accompanying notes are an integral part of these consolidated financial statements.

NEOTHERAPEUTICS, INC. AND SUBSIDIARIES

(A DEVELOPMENT STAGE ENTERPRISE)

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT) AND COMPREHENSIVE INCOME (LOSS)

	PREFERRED STOCK		COMMON STOCK		REVENUE PARTICIPATIO UNITS
	SHARES	PAR	SHARES	PAR	
Balance at Inception (June 15, 1987)	-	-	-	-	-
Net loss	-	-	-	-	-
Common stock issued	-	-	465,902	2,100	-
Balance at December 31, 1987	-	-	465,902	2,100	-
Net loss	-	-	-	-	-
Common Stock Issued	-	-	499,173	2,250	-
Revenue participation units issuance	-	-	-	-	594,000
Balance at December 31, 1988	-	-	965,075	4,350	594,000
Net loss	-	-	-	-	-
Revenue participation units issuance	-	-	-	-	82,000
Net effect of acquisition	-	-	145,000	354,316	-
Balance at December 31, 1989	-	-	1,110,075	358,666	676,000
Net loss	-	-	-	-	-
Exercise of warrants	-	-	31,108	136,402	-
Common stock issued in exchange for accrued salaries	-	-	402,518	503,144	-
Balance at December 31, 1990	-	-	1,543,701	998,212	676,000
Net loss	-	-	-	-	-
Balance at December 31, 1991	-	-	1,543,701	998,212	676,000
Net loss	-	-	-	-	-

(continuation of table)

	NOTES RECEIVABLE FROM DIRECTORS AND OFFICERS	ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)	DEFICIT ACCUMULATED DURING THE DEVELOPMENT STAGE	TOTAL
Balance at Inception (June 15, 1987)	-	-	-	-
Net loss	-	-	(31,875)	(31,875)
Common stock issued	-	-	-	2,100
Balance at December 31, 1987	-	-	(31,875)	(29,775)
Net loss	-	-	(556,484)	(556,484)
Common Stock Issued	-	-	-	2,250
Revenue participation units issuance	-	-	-	594,000
Balance at December 31, 1988	-	-	(588,359)	9,991
Net loss	-	-	(934,563)	(934,563)
Revenue participation units issuance	-	-	-	82,000
Net effect of acquisition	-	-	-	354,316
Balance at December 31, 1989	-	-	(1,522,922)	(488,256)
Net loss	-	-	(859,172)	(859,172)
Exercise of warrants	-	-	-	136,402
Common stock issued in exchange for accrued salaries	-	-	-	503,144
Balance at December 31, 1990	-	-	(2,382,094)	(707,882)
Net loss	-	-	(764,488)	(764,488)
Balance at December 31, 1991	-	-	(3,146,582)	(1,472,370)
Net loss	-	-	(423,691)	(423,691)

The accompanying notes are an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT) AND COMPREHENSIVE INCOME (LOSS) (CONTINUED)

	PREFERRED STOCK		COMMON STOCK		REVEN PARTICI UNIT
	SHARES	PAR	SHARES	PAR	
Balance at December 31, 1992	-	-	1,543,701	998,212	
Net loss	-	-	-	-	
Common stock issued in exchange for investment banking service	-	-	40,000	54,000	
Common stock issued in exchange for accrued salaries	-	-	255,476	638,694	
Common stock issued in exchange for note payable to President	-	-	200,000	500,000	
Common stock issued in exchange for accrued expenses	-	-	20,842	52,104	
Stock options issued in exchange for accrued professional services	-	-	-	108,000	
Stock options issued in exchange for future services	-	-	-	39,750	
Stock options issued for services	-	-	-	-	
Balance at December 31, 1993	-	-	2,060,019	2,390,760	
Net loss	-	-	-	-	
Common stock issued for cash	-	-	13,000	32,500	
Amortization of deferred compensation	-	-	-	-	
Balance at December 31, 1994	-	-	2,073,019	2,423,260	
Net loss	-	-	-	-	
Common stock issued for cash	-	-	22,000	55,000	
Common stock forfeiture	-	-	(678,836)	(1,193,943)	
Common stock reissued	-	-	678,836	1,697,090	
Stock options issued for services	-	-	-	105,000	
Balance at December 31, 1995	-	-	2,095,019	3,086,407	
Net loss	-	-	-	-	
Common stock issued for cash	-	-	266,788	633,625	
Stock options issued for services	-	-	-	103,950	
Conversion of revenue participation units into common stock	-	-	300,000	1,125,000	(
Common stock and warrants issued for cash net of costs of public offering	-	-	2,700,000	18,176,781	

(continuation of table)

	NOTES RECEIVABLE FROM DIRECTORS AND OFFICERS	ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)	DEFICIT ACCUMULATED DURING THE DEVELOPMENT STAGE	TOTA
Balance at December 31, 1992	-	-	(3,570,273)	(1,896
Net loss	-	-	(237,815)	(237
Common stock issued in exchange for investment banking service	-	-	-	54
Common stock issued in exchange for accrued salaries	-	-	-	638
Common stock issued in exchange for note payable to President	-	-	-	500
Common stock issued in exchange for accrued expenses	-	-	-	52
Stock options issued in exchange for accrued professional services	-	-	-	108
Stock options issued in exchange for future services	-	-	-	39
Stock options issued for services	-	-	-	(93
Balance at December 31, 1993	-	-	(3,808,088)	(835
Net loss	-		(312,342)	(312
Common stock issued for cash	-	-	-	32
Amortization of deferred compensation	-	-	-	93
Balance at December 31, 1994	-	-	(4,120,430)	(1,021
Net loss	-	-	(895,378)	(895
Common stock issued for cash	-	-	-	55
Common stock forfeiture	-	-	-	(1,193
Common stock reissued	-	-	-	1,697
Stock options issued for services	-	-	-	105
Balance at December 31, 1995	-	-	(5,015,808)	(1,253
Net loss	-	-	(1,038,875)	(1,038
Common stock issued for cash	-	-	-	633
Stock options issued for services	-	-	-	103
Conversion of revenue participation units into common stock	-	-	(449,000)	
Common stock and warrants issued for cash net of costs of public offering	-	-	-	18,176

The accompanying notes are an integral part of these consolidated financial statements.

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NEOTHERAPEUTICS, INC. AND SUBSIDIARIES

(A DEVELOPMENT STAGE ENTERPRISE)

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT) AND COMPREHENSIVE INCOME (LOSS) (CONTINUED)

	PREFERRED STOCK		COMMON STOCK		REVE PARTIC UNIT
	SHARES	PAR	SHARES	PAR	
Balance at December 31, 1996	-	-	5,361,807	23,125,763	
Net loss	-	-	-	-	
Unrealized gains on available-for-sale securities	-	-	-	-	
Comprehensive loss					
Stock options exercise	-	-	104,000	2,600	
Stock options issued for services	-	-	-	60,000	
Reincorporation	-	-	-	(23,182,897)	
Balance at December 31, 1997	-	-	5,465,807	5,466	
Net loss	-	-	-	-	
Unrealized gains on available-for-sale securities	-	-	-	-	
Comprehensive loss					
Common stock and warrants issued for cash under Line of Equity agreement, net of issuance costs	-	-	506,047	506	
Stock options exercised by employees, directors and consultants	-	-	134,000	134	
Notes receivable from certain officers and directors to exercise stock options	-	-	-	-	
Exercise of underwriters' warrant	-	-	41,000	41	
Stock options issued for services	-	-	-	-	
Warrant to purchase common stock issued in connection with equipment financing	-	-	-	-	

(continuation of table)

	NOTES RECEIVABLE FROM DIRECTORS AND OFFICERS	ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)	DEFICIT ACCUMULATED DURING THE DEVELOPMENT STAGE	TOT
Balance at December 31, 1996	-	-	(6,503,683)	16,622
Net loss	-	-	(6,161,541)	(6,161
Unrealized gains on available-for-sale securities	-	20,256	-	20
Comprehensive loss		20,256	(6,161,541)	(6,141
Stock options exercise	-	-	-	2
Stock options issued for services	-	-	-	60
Reincorporation	-	-	-	
Balance at December 31, 1997	-	20,256	(12,665,224)	10,543
Net loss	-	-	(11,604,556)	(11,604
Unrealized gains on available-for-sale securities	-	3,951	-	3
Comprehensive loss		3,951	(11,604,556)	(11,600
Common stock and warrants issued for cash under Line of Equity agreement, net of issuance costs	-	-	-	3,451
Stock options exercised by employees, directors and consultants	-	-	-	340
Notes receivable from certain officers and directors to exercise stock options	(286,560)	-	-	(286
Exercise of underwriters' warrant	-	-	-	373
Stock options issued for services	-	-	-	422
Warrant to purchase common stock issued in connection with equipment financing	-	-	-	45

The accompanying notes are an integral part of these consolidated financial statements.

NEOTHERAPEUTICS, INC. AND SUBSIDIARIES

(A DEVELOPMENT STAGE ENTERPRISE)

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT) AND COMPREHENSIVE INCOME (LOSS) (CONTINUED)

	PREFERRED STOCK		COMMON STOCK		REVEN PARTICI UNIT
	SHARES	PAR	SHARES	PAR	
Balance at December 31, 1998	-	-	6,146,854	6,147	
Net loss	-	-	-	-	
Unrealized gains on available-for-sale securities	-	-	-	-	
Comprehensive loss					
Sale of common stock to Private Equity Line investor, net of issuance costs	-	-	211,393	211	
Sale of shares of 5% Series A Preferred stock, net of offering costs and allocated warrants	400	3,608,788	-	-	
Conversion of preferred stock into common stock	(400)	(3,608,788)	347,334	347	
Common stock and warrants issued for cash under an exempt private sale agreement, net of offering costs	-	-	400,000	400	
Sale of common stock pursuant to a secondary public offering, net of offering costs	-	-	1,150,000	1,150	
Common stock issued to legal counsel for services	-	-	12,500	13	
Fair value of warrants issued as compensation to investment advisor	-	-	-	-	
Exercise of underwriters' warrants	-	-	9,000	9	
Stock options exercised by employees	-	-	1,900	2	
Stock options and warrants issued for legal consulting services	-	-	-	-	
Sale of common stock to private investors	-	-	845,594	846	
Common stock forfeiture in settlement of litigation	-	-	(678,835)	(679)	
Common stock and warrants issued in settlement of litigation	-	-	332,630	333	
Dividends paid on preferred stock	-	-	-	-	

(Continuation of table)

NOTES RECEIVABLE FROM DIRECTORS AND OFFICERS	ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)	DEFICIT ACCUMULATED DURING THE DEVELOPMENT STAGE

Balance at December 31, 1998	(286,560)	24,207	(24,269,780)
Net loss	-	-	(25,989,905)
Unrealized gains on available-for-sale securities	-	(62,779)	-
Comprehensive loss		(62,779)	(25,989,905)
Sale of common stock to Private Equity Line investor, net of issuance costs	-	-	-
Sale of shares of 5% Series A Preferred stock, net of offering costs and allocated warrants	-	-	-
Conversion of preferred stock into common stock	-	-	-
Common stock and warrants issued for cash under an exempt private sale agreement, net of offering costs	-	-	-
Sale of common stock pursuant to a secondary public offering, net of offering costs	-	-	-
Common stock issued to legal counsel for services	-	-	-
Fair value of warrants issued as compensation to investment advisor	-	-	-
Exercise of underwriters' warrants	-	-	-
Stock options exercised by employees	-	-	-
Stock options and warrants issued for legal consulting services	-	-	-
Sale of common stock to private investors	-	-	-
Common stock forfeiture in settlement of litigation	-	-	-
Common stock and warrants issued in settlement of litigation	-	-	-
Dividends paid on preferred stock	-	-	(136,246)

The accompanying notes are an integral part of these consolidated financial statements.

NEOTHERAPEUTICS, INC. AND SUBSIDIARIES

(A DEVELOPMENT STAGE ENTERPRISE)

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT) AND COMPREHENSIVE INCOME (LOSS) (CONTINUED)

	PREFERRED STOCK		COMMON STOCK		REVEN PARTICI UNIT
	SHARES	PAR	SHARES	PAR	
Balance at December 31, 1999	-	-	8,778,370	8,779	
Net loss	-	-	-	-	
Unrealized gains on available-for-sale securities	-	-	-	-	
Comprehensive loss					
Sale of common stock, net of issuance costs	-	-	2,805,592	2,806	
Fair value of warrants sold with 5% convertible debentures	-	-	-	-	
Conversion of convertible debentures	-	-	1,594,177	1,594	
Fair value of warrants sold in subsidiary offerings	-	-	-	-	
Common stock to be issued to vendor for services	-	-	-	27	
Fair value of warrants to be issued to vendor for services	-	-	-	-	
Common stock issued to consultants for service	-	-	2,000	2	
Public warrant exercise	-	-	4,490	5	
Stock options exercised by employees	-	-	92,598	93	
Stock options exercised by non-employees	-	-	30,000	1	
Deferred compensation from employee stock options	-	-	-	-	
Notes receivable from certain officers and directors to purchase stock or exercise stock options	-	-	-	-	
Repayment and forgiveness of notes to officers and directors upon exercise of stock options	-	-	-	-	

(Continuation of table)

	NOTES RECEIVABLE FROM DIRECTORS AND OFFICERS	ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)	DEFICIT ACCUMULATED DURING THE DEVELOPMENT STAGE
Balance at December 31, 1999	(286,560)	(38,572)	(50,395,931)
Net loss	-	-	(46,427,287)
Unrealized gains on available-for-sale securities	-	39,335	-
Comprehensive loss		39,335	(46,427,287)
Sale of common stock, net of			

issuance costs	-	-	-
Fair value of warrants sold with 5% convertible debentures	-	-	-
Conversion of convertible debentures	-	-	-
Fair value of warrants sold in subsidiary offerings	-	-	-
Common stock to be issued to vendor for services	-	-	-
Fair value of warrants to be issued to vendor for services	-	-	-
Common stock issued to consultants for service	-	-	-
Public warrant exercise	-	-	-
Stock options exercised by employees	-	-	-
Stock options exercised by non-employees	-	-	-
Deferred compensation from employee stock options	-	-	-
Notes receivable from certain officers and directors to purchase stock or exercise stock options	(435,649)	-	-
Repayment and forgiveness of notes to officers and directors upon exercise of stock options	61,560	-	-

The accompanying notes are an integral part of these consolidated financial statements.

NEOTHERAPEUTICS, INC. AND SUBSIDIARIES

(A DEVELOPMENT STAGE ENTERPRISE)

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT) AND COMPREHENSIVE INCOME (LOSS) (CONTINUED)

	PREFERRED STOCK		COMMON STOCK		REVEN PARTICI UNIT
	SHARES	PAR	SHARES	PAR	
Balance at December 31, 2000	-	-	13,307,227	13,307	
Net loss	-	-	-	-	
Unrealized gains on available-for-sale securities	-	-	-	-	
Comprehensive loss					
Sale of common stock for cash net of issuance costs	-	-	9,979,340	9,979	

Fair value of stock options granted to consultant	-	-	-	-	
Fair value of warrants issued for consulting services	-	-	-	-	
Fair value of common stock issued for consulting services	-	-	5,000	5	
Conversion of Preferred Stock of Subsidiary into Series C Preferred Stock	200	1,973,488	-	-	
Conversion of Series C Preferred Stock into common stock	(170)	(1,677,465)	485,591	486	
Purchase and retirement of Series C Preferred Stock	(30)	(296,023)	-	-	
Deferred compensation from employee stock options	-	-	-	-	
Amortization of employee stock option compensation previously deferred	-	-	-	-	
Sale of stock in subsidiary	-	-	-	-	
Dividends paid on preferred stock	-	-	-	-	
Reclassification of warrants fair value and other items previously included in minority interest	-	-	-	-	
Litigation settlement	-	-	-	-	
Balance at December 31, 2001	-	-	23,777,158	23,777	

(Continuation of table)

	NOTES RECEIVABLE FROM DIRECTORS AND OFFICERS	ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)	DEFICIT ACCUMULATED DURING THE DEVELOPMENT STAGE
Balance at December 31, 2000	(660,649)	763	(96,823,218)
Net loss	-	-	(27,834,820)
Unrealized gains on available-for-sale securities	-	86,302	-
Comprehensive loss		86,302	(27,834,820)
Sale of common stock for cash net of issuance costs	-	-	-
Fair value of stock options granted to consultant	-	-	-
Fair value of warrants issued for consulting services	-	-	-
Fair value of common stock issued for consulting services	-	-	-
Conversion of Preferred Stock of Subsidiary into Series C Preferred Stock	-	-	-
Conversion of Series C Preferred			

Stock into common stock	-	-	-
Purchase and retirement of Series C Preferred Stock	-	-	(3,977)
Deferred compensation from employee stock options	-	-	-
Amortization of employee stock option compensation previously deferred	-	-	-
Sale of stock in subsidiary	-	-	-
Dividends paid on preferred stock	-	-	(815,807)
Reclassification of warrants fair value and other items previously included in minority interest	-	-	-
Litigation settlement	45,000	-	-
Balance at December 31, 2001	(615,649)	87,065	(125,477,822)

The accompanying notes are an integral part of these consolidated financial statements.

NEOTHERAPEUTICS, INC. AND SUBSIDIARIES

(A DEVELOPMENT STAGE ENTERPRISE)

CONSOLIDATED STATEMENTS OF CASH FLOWS

	1999	2000
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net (loss)	(25,989,905)	(46,427,287)
Adjustments to reconcile net loss to net cash used in operating activities:		
Non-cash items included in net loss:		
Minority interest in net loss	-	-
Depreciation and amortization	519,875	588,856
Amortization of debt discount	13,102	13,102
Amortization of employee stock option compensation previously deferred	393,751	755,496
Issuance of common stock for services	-	-
Beneficial conversion feature related to preferred stock of consolidated subsidiary	-	1,463,597
Amortization of discount on convertible debentures and beneficial conversion feature	-	539,277

Fair value of warrants issued for consulting services	-	-
Issuance of common stock in settlement of litigation	2,458,359	-
Forgiveness of notes to officers and directors	-	-
Compensation expense for extension of Debt Conversion Agreements, net	-	-
Gain on sale of assets	-	-
Changes in operating assets and liabilities:		
Increase in other receivables, prepaid expenses and refundable deposits	(35,482)	(186,025)
Increase in accounts payable and accrued expenses	2,334,726	329,512
Increase (decrease) in accrued payroll and related taxes	30,452	153,562
Increase in other non-current liabilities	28,812	11,411
(Repayment of) proceeds from notes payable to related parties, net	-	(272,731)
Decrease in employee expense reimbursement and accrued interest to related parties	-	-
Net cash used in operating activities	(20,246,310)	(43,031,230)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchases of property and equipment	(429,861)	(368,911)
Purchases of marketable securities and short-term investments, net	(1,248,643)	(2,316,668)
(Increase) decrease in other assets	412,376	(300,910)
Payment of organization costs	-	-
Proceeds from sale of equipment	-	-
Issuance of notes receivable	-	-
Net cash used in investing activities	(1,266,128)	(2,986,489)

The accompanying notes are an integral part of these consolidated financial statements.

NEOTHERAPEUTICS, INC. AND SUBSIDIARIES

(A DEVELOPMENT STAGE ENTERPRISE)

CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)

	1999	2000	
CASH FLOW FROM FINANCING ACTIVITIES:...			

Proceeds from issuance of common stock and warrants, net of related offering costs and expenses	24,048,532	29,912,724	28
Proceeds from issuance of common stock in consolidated subsidiary	-	-	
Proceeds from preferred stock issuance, net of offering	3,608,788	-	
Proceeds from sale of preferred stock of consolidated subsidiary, net of issuance cost	-	6,488,493	
Proceeds from exercise of stock options and warrants	94,569	75,436	
Proceeds from sale of convertible debentures, net of issuance cost	-	9,387,321	
Proceeds from long-term debt	-	-	
Payments made on capital lease and loan obligations	(474,326)	(475,660)	
Proceeds from notes receivables from officers and directors for purchase of common stock	-	61,560	
Purchase of preferred stock of consolidated subsidiary	-	-	(4
Payments of dividend on preferred stock of consolidated subsidiary	-	-	
Purchase of series C preferred stock	-	-	
Dividends paid to preferred stockholders	(136,246)	-	
Cash at acquisitions	-	-	
Net cash provided by financing activities	27,141,317	45,449,874	21
Net increase (decrease) in cash and cash equivalents	5,628,879	(567,845)	(5
Cash and cash equivalents, beginning of period	1,097,341	6,726,220	6
Cash and cash equivalents, end of period	6,726,220	6,158,375	
SCHEDULE OF NONCASH INVESTING AND FINANCING ACTIVITIES:			
Fixed assets financed by capital lease	$ -	$ 475,340	$
Unrealized (gain) loss on marketable securities	$ 62,779	$ (39,335)	$
Stock and stock options granted to employees and non-employees below fair market value	$ -	$ 959,850	$ 2
Conversion of subsidiary preferred stock into company series C preferred stock	-	-	$1
Conversion of preferred stock and convertible debentures into shares of common stock	$ -	$ 1,675,463	$ 1
Retirement of preferred stock	$ -	$ -	$
Reclassification of warrants and other	$ -	$ -	$
Minority interest share of proceeds from issuance of common stock in consolidated subsidiary	$ -	$ -	$
Financing of insurance policies and other assets	$ -	$ 379,000	$
Issuance of warrants in connection with equity and debt financing	$ 344,610	$ 512,740	$
Dividends on preferred stock paid in shares of common stock	$ 82,312	$ -	$
Conversion of the accrued liabilities to shares of common stock	$ -	$ -	$

Conversion of accrued interest into notes payable to related parties	$ -	$ -	$
Conversion of revenue participation units into shares of common stock	$ -	$ -	$

The accompanying notes are an integral part of these consolidated financial statements.

NEOTHERAPEUTICS, INC. AND SUBSIDIARIES

(A DEVELOPMENT STAGE ENTERPRISE)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2001

1. ORGANIZATION AND BUSINESSES AND SUMMARY OF CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Organization and Business

We incorporated NeoTherapeutics, Inc. (or NeoTherapeutics) in Colorado as Americus Funding Corporation (or AFC) in December 1987. In August 1996, we changed AFC's name to NeoTherapeutics, Inc. and in June 1997, we reincorporated NeoTherapeutics in the state of Delaware. We had four subsidiaries as of December 31, 2001: NeoTherapeutics GmbH, wholly owned, incorporated in Switzerland in April 1997 (or NeoGmbH); NeoGene Technologies, Inc., 88.4% owned, incorporated in California in October 1999 (or NeoGene); NeoOncoRx, Inc., 90.5% owned, incorporated in California in November 2000 (or NeoOncoRx); and NeoTravel, Inc., wholly owned, incorporated in California in April 2001 (or NeoTravel). We merged a previously wholly owned subsidiary, Advanced ImmunoTherapeutics, Inc., into NeoTherapeutics, Inc. in 2001. The accompanying consolidated financial statements include the operating results of NeoTherapeutics, Inc. and its subsidiaries (or collectively, the Company, we, our, and similar references).

We are a development-stage pharmaceutical company engaged in the pharmaceutical business and the functional genomics business. Our pharmaceutical business engages in discovering and developing novel technology platforms for the discovery and development, co-development and out-licensing of therapeutic drugs for nervous system disorders and in the in-licensing and development, co-development and out-licensing of late-stage cancer drugs. Our functional genomics business engages in discovering gene functions and validating novel molecular targets for innovative drug development. We conduct our pharmaceutical activities at NeoTherapeutics and NeoOncoRx, and our functional genomics activities at NeoGene.

Summary of Critical Accounting Policies and Estimates

Development Stage Enterprise and Liquidity

We have prepared the consolidated financial statements under the assumption that we are a going concern. We are in the development stage and, therefore, we devote substantially all of our efforts to research and

development activities. Since our inception, we have incurred cumulative losses of approximately $124.1 million through December 31, 2001, and expect to incur substantial losses over the next several years.

We spent cash in 2001 at an average rate in excess of approximately $2.3 million per month, and we expect this rate of spending to continue through the reporting of results from our current pivotal clinical trial for Neotrofin in Alzheimer's disease. Our burn-rate after that will be a function of the result of that trial and the timing of our phase 3 clinical study of satraplatin in prostate cancer. If the Alzheimer's trial is positive, we would expect our burn-rate to remain stable. If, based on the data, we decide not to initiate another pivotal study of Neotrofin in Alzheimer's disease, our burn-rate will decrease significantly.

At the present time, our business does not generate cash from operations needed to finance our short-term operations. We will rely primarily on (a.) raising funds through the sale of our securities including under our Sales Agreement with Cantor Fitzgerald & Co., which is on a "best-efforts" basis, and/or (b.) out-licensing our technology, to meet all of our short-term cash needs. We have generated operating losses since our inception and our existing cash and investment securities, including net cash proceeds of $5.8 million raised in March 2002, are not sufficient to fund our current planned pharmaceutical and functional genomics operations for the next 12 months. Therefore, we will need to seek additional funding by the end of July 2002, or sooner, through public or private financings, including equity financings, and through other arrangements to continue operating our businesses. As has been stated by our independent public accountants in their opinion, our current financial position raises substantial doubt as to our ability to continue as a going concern.

The results of a clinical trial on our lead drug candidate Neotrofin should be available during the second quarter of 2002. If the results of this trial are sufficiently positive, we expect to be able to raise the capital necessary to fund our currently planned pharmaceutical and functional genomics operations. Additionally, we anticipate that our long-term business plans require that we enter into collaborative partnership agreements and strategic alliance agreements with larger pharmaceutical companies to co-develop, manufacture and market our product candidates. If the results of this trial are negative (or not sufficiently positive), we may not be able to raise additional funds on favorable terms, if at all. Accordingly, we would be forced to significantly change our business plans and restructure our operations to conserve cash, which would likely involve some, combination, or all of the following:

- Out-license or sell some or all of our intellectual, technological, and/or tangible property not presently contemplated and at terms that we believe would not be favorable to us;

- Reduce the size of our workforce, including the number of our scientific personnel;

- Reduce the scope and nature of our research and drug development activities including the possible termination of clinical trials; and

- Terminate operating leases and other contractual arrangements.

Although no assurance can be given, we believe that we can continue to operate as a going concern and, accordingly, our consolidated financial statements have been prepared assuming that we will continue as a going concern. Consequently, our consolidated financial statements do not include adjustments relating to the recoverability and classification of asset carrying amounts or the amount and classification of liabilities that would be required if we were

not able to continue as a going concern.

Principles of Consolidation

Our consolidated financial statements include our accounts including those of our wholly owned and majority owned subsidiaries. We eliminated all significant intercompany accounts and transactions.

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

Cash and Cash Equivalents

Cash and cash equivalents consist of cash and highly liquid investments of commercial paper and demand notes with original maturities of 90 days or less.

Marketable Securities and Short-Term Investments

We classify investments in debt and equity securities among three categories: held-to-maturity, trading, and available-for-sale. As of December 31, 2001, all of our debt and equity securities holdings were categorized as available-for-sale. We carry available-for-sale securities at fair value, with unrealized gains and losses included as a component of accumulated other comprehensive income (loss) in stockholders' equity. We use quoted market prices to determine the fair value of these investments.

Prepaid Expenses and Refundable Deposits

Prepaid expenses are deferred and later recorded as an expense during the period benefited. Deposits are expected to become refundable at a later date.

Property and Equipment Purchased or Leased

We carry property and equipment at historical cost, less accumulated depreciation and amortization. When property and equipment are disposed of, the related cost and accumulated depreciation are removed from the accounts and any resulting gain or loss is reflected in income. Depreciation and amortization are computed using the straight-line method over the following estimated useful lives:

Equipment	5 to 7 years
Leasehold Improvements	The shorter of the estimated useful life or lease term

Research and Development

We expense all research and development activity costs in the period incurred.

Stock-Based Compensation

We account for all of our stock based compensation in accordance with SFAS No. 123, "Accounting for Stock-Based Compensation" (or SFAS 123) that encourages companies to recognize stock based compensation using a fair market value methodology. Under SFAS 123, the fair value of a stock option (or its equivalent) granted by a public entity shall be estimated using an

option-pricing model (for example, the Black-Scholes or binomial model) that takes into account certain assumptions. However, SFAS 123 permits continued use of accounting for employee stock based compensation using the intrinsic value methodology of accounting promulgated by Accounting Principles Board (or APB) Opinion No. 25, "Accounting for Stock Issued to Employees" (or APB 25). Under the intrinsic method, stock based compensation is measured as the excess, if any, of the quoted market price of our common stock at the measurement date over the exercise price.

We recognize non-employee stock based compensation or payments using a fair market value methodology promulgated by SFAS 123.

We recognize employee stock based compensation using the intrinsic value methodology promulgated by APB 25.

Basic and Diluted Net Loss Per Share

We calculate basic and diluted net loss per share using: the weighted average number of common shares outstanding and the net loss, less preferred stock dividends, during each year, respectively. We exclude all antidilutive common stock equivalents from the basic and diluted net loss per share calculation.

Use of Estimates

We make certain estimates to prepare our financial statements that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and revenues and expenses reported during the reporting period. Actual results could differ from our estimates.

We have estimated that our current working capital plus funds raised or to be raised subsequent to year end will be sufficient for us to continue as a going concern and therefore have prepared the financial statements on that basis. That basis includes estimating future cash requirements of planned research & development activities and general and administrative requirements, the retention of key personnel, certain clinical trial results, maintained market need for our product candidates, and other major business assumptions. If these estimates prove to be wrong, we may not be able to continue as a going concern.

Revenue Recognition

We recognize revenue from each sale contract over each sale contract's operative life and after all contingencies related to us being due receipt of such revenue are eliminated.

Income Taxes

We recognize deferred tax assets and liabilities for the future tax consequences attributable to differences between the financial statement bases and tax bases of existing assets and liabilities. We recorded a valuation allowance equal to our net deferred tax asset.

New Accounting Pronouncements

In June 2001, the Financial Accounting Standards Board (or FASB) issued Statement of Financial Accounting Standards No. 141, Business Combinations (or SFAS 141). SFAS 141 addresses financial accounting and reporting for business combinations and supersedes APB Opinion No. 16. Business Combinations, and FASB Statement No. 38, Accounting for Preacquisition Contingencies of Purchased Enterprises, SFAS 141 requires use of the purchase method of accounting for all business combinations initiated after June 30, 2001, the same date that we adopted SFAS 141. The adoption of SFAS 141 did not have a material impact on our financial condition or results of operations.

In June 2001, the FASB issued Statement of Financial Accounting Standards No. 142, Goodwill and Other Intangible Assets (or SFAS 142). SFAS 142 addresses financial accounting and reporting for acquired goodwill and other intangible assets and supersedes APB Opinion No. 17, "Intangible Assets." SFAS 142 addresses how intangible assets that are acquired individually or with a group of other assets (but not those acquired in a business combination) should be accounted for in financial statements upon their acquisition. SFAS also addresses how goodwill and other intangible assets should be accounted for after they have been initially recognized in the financial statements. Goodwill shall no longer be amortized but shall be assessed at least annually for impairment using a fair value methodology. We adopted SFAS 142 for all goodwill and other intangible assets acquired after June 30, 2001 and for all existing goodwill and other intangible assets beginning January 1, 2002. We do not anticipate the adoption of SFAS 142 to have a material impact on our financial condition or results of operations.

In June 2001, the FASB issued SFAS No. 143, Accounting for Asset Retirement Obligations (or SFAS 143). SFAS 143 addresses financial accounting and reporting for obligations associated with the retirement of tangible long-lived assets and the associated asset retirement costs. It applies to legal obligations associated with the retirement of long-lived assets that result from the acquisition, construction, development and/or the normal operation of a long-lived asset, except for certain obligations of lessees. SFAS 143 requires that the fair value of a liability for an asset retirement obligation be recognized in the period in which it is incurred if a reasonable estimate of fair value can be made. The associated asset retirement costs are capitalized as part of the carrying amount of the long-lived asset. SFAS 143 is effective for financial statements issued for fiscal years beginning after June 15, 2002, with earlier application being encouraged. We do not anticipate the adoption of SFAS 143 to have a material impact on our financial condition or results of operations.

In August 2001, the FASB issued SFAS No. 144, Accounting for the Impairment or Disposal of Long-Lived Assets (or SFAS 144). SFAS 144 addresses financial accounting and reporting for the impairment or disposal of long-lived assets. SFAS 144 supersedes SFAS No. 121, Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to Be Disposed Of, and the accounting and reporting provisions of APB Opinion No. 30, Reporting the Results of Operations - Reporting the Effects of Disposal of a Segment of a Business, and

Extraordinary, Unusual and Infrequently Occurring Events and Transactions, for the disposal of a segment of a business (as previously defined in APB Opinion No. 30). SFAS 144 is effective for financial statements issued for fiscal years beginning after December 15, 2001, with early application encouraged, and

generally is to be applied prospectively. We do not anticipate the adoption of SFAS 144 to have a material impact on our financial condition and results of operations.

2. CONCENTRATIONS OF CREDIT RISK

We invest our excess cash in marketable debt and equity securities and do not require collateral or other security in addition to collateral or other security contained in the investment contract. Investments are not insured against the possibility of a complete loss of earnings or principal and are subject to a degree of credit risk related to the credit worthiness of the underlying issuer. We widely diversify our investments in high-grade securities to avoid concentrations of credit risk and believe that such credit risk inherent in our investments at December 31, 2001 is minimal.

3. RELATED PARTY TRANSACTIONS

During 1987 and 1988, our Chief Executive Officer (or CEO), who is also a major stockholder of ours, loaned a total of $270,650 to us for working capital purposes, of which $250,000 plus $2,000 of accrued interest was canceled in December 1988 in exchange for the issuance of 28 Revenue Participation Units (or RPU's). The RPU's were converted into 112,000 shares of our common stock.

From 1989 through 1993, we borrowed an additional $757,900 from the CEO, which, together with accrued interest of $300,404, aggregated $1,058,304 on December 31, 1993, at which time we issued 200,000 shares of common stock to the CEO in exchange for cancellation of $500,000 of loans made to us. The remaining $257,900 in principal and $300,404 of accrued interest were converted to a $558,304 promissory note which, as amended from time to time, is currently unsecured, and is payable upon demand. Interest is payable monthly at the annual rate of 9%. The note was partially repaid in 2000 when we advanced cash to the CEO to pay payroll taxes arising from the CEO's exercise of a warrant for 88,173 shares of our common stock at $3.75 per share in August 2000. Additional repayments were made in 2001. The note balance at December 31, 2001 was $135,574.

Assignment of Patents by Chief Executive Officer

The CEO assigned to us all of his rights in nine patents. In connection with the assignment of these patents to us, we entered into royalty agreements with the CEO (or CEO Agreements), which expire concurrently with the expiration of the underlying patents and any patents derived therefrom. Under each of the CEO Agreements, as amended, we are obligated to pay the CEO a royalty of two percent (2%) of all revenues derived by us from the use and sale by us of any products or methods included in the patents. Further, in the event that we terminate the CEO's employment without cause, the royalty rate under each CEO Agreement will increase from two percent (2%) to five percent (5%). Finally, in the event of the CEO's death, the family or estate is entitled to continue to receive under each CEO Agreement royalties at a rate of two percent (2%) for the duration of the respective CEO Agreement.

McMaster University Agreement

On July 10, 1996, we entered into a license agreement with McMaster University (or McMaster) that allows us the use of certain technologies developed by McMaster covered in the patents filed jointly by us and McMaster (US Patent Nos. 5,447,939, 5,801,184, 6,027,936, 6,338,963, and 6,350,752), all of which are also encumbered by CEO Agreements. Under the agreement, we paid a one time licensing fee of $15,000 and are obligated to pay to McMaster an annual royalty of five percent (5%) on net sales of products containing compounds developed by McMaster. In July 1997, we began, and have continued making, annual minimum royalty payments of $25,000.

Director and Officer Notes for the Exercise of Equity Instruments

We made loans to certain of our directors and officers for the exercise of stock options or the purchase of stock. We loaned $286,560 in 1998, and $435,649 in 2000. During 2000, one individual paid $61,560 back to us and during 2001, in connection with the settlement of a litigation matter, we forgave a $45,000 note to one individual. At December 31, 2001, $615,649 remained due to us from directors and officers for the purchase of shares of common stock or the exercise of stock options. These notes accrue interest at rates between 7% and 9% and are classified as an offset to stockholders' equity.

4. NET LOSS PER SHARE

Basic and diluted loss per share for the year ended December 31, 2001 was computed after increasing the net loss by dividend amounting to $815,807 paid to Series A Preferred Stock holders that resulted from our repurchase of the preferred stock.

5. MARKETABLE SECURITIES AND SHORT-TERM INVESTMENTS

A summary of marketable securities and short-term investments at December 31, 2000 and 2001 is as follows:

Type of Investment	Cost	Gross Unrealized Gains	Gross Unrealized (Losses)	Marke Valu
December 31, 2000:				
Available-for-Sale:				
U.S. Government Treasury Notes and Bonds	$ 1,643,758	$ 2,421	$ -	$ 1,646
U.S. Government guaranteed securities	246,493	4,185	-	250
Corporate Bonds	3,420,201	4,822	(10,665)	3,414
Total Investments	$ 5,310,452	$ 11,428	$ (10,665)	$ 5,311
December 31, 2001:				
Available-for-Sale:				
U.S. Government Treasury Notes and Bonds	$ 150,072	$ 2,279	$ -	$ 152
U.S. Government guaranteed securities	212,491	6,709	-	219
Corporate Bonds	6,461,227	78,077	-	6,539
Margin Loans	(503,467)	-	-	(503
Total Investments	$ 6,320,323	$ 87,065	$ -	$ 6,407

For the years ended December 31, 2000 and 2001, sales of securities at fair market value aggregated $848,202 and $7,642,687, and the Company realized gains over original cost of $3,892 and of $131,150 and losses below original

cost of $13,561 and of $101,171, respectively. All gains and losses reported in a year as other comprehensive income have been reclassified into net income in the subsequent year.

From time to time, we use margin loans to purchase certain available-for-sale securities when cash is not available based on timing of other investment maturities. Our agreement with our bank secures the margin loans with our investments and grants the bank the right to collect money owed to them by us as a result of a margin loan prior to cash being distributed to the Company. Therefore, the margin loans are offset in the balance sheet against marketable securities and short-term investments.

6. CAPITAL LEASE OBLIGATIONS AND OTHER DEBT

In September 1998, we entered into a Master Note and Security Agreement (or the Note) with a finance company affiliated with our bank whereby we borrowed $1.5 million under the Note for equipment and computer software purchases. Borrowings are collateralized by substantially all of our assets, exclusive of our patents and other intellectual properties. The note requires monthly repayments of $41,277, bears interest at approximately 12% and is due March 2002, at which time a final principal installment of $150,000 is due. We have also granted to the finance company a warrant to purchase up to 13,459 shares of our common stock at $7.43 a share which was valued at $45,000 using the Black-Scholes option-pricing model with the following assumptions: Risk-free interest rate of 5.02 percent; expected life of three years; expected volatility of 75.3 percent. The warrant was recorded as a prepaid expense and is being amortized using the effective interest method over the life of the note.

In September 2000, we financed the premium amounting to $322,000 for a three-year insurance policy through a borrowing from the insurer. The loan was payable through August 2001 in monthly installments of $30,556 including principal and 8.57% annual interest. At December 31, 2000, approximately $210,000 related to this note was classified on the balance sheet as accrued expenses.

On September 22, 2000 we signed an agreement to lease up to $2.5 million in equipment from a major equipment leasing and remarketing company (or lessor). Under the terms of the agreement, we can draw up to $2.5 million through September 2001 and are required to make quarterly payments over three years on cumulative advances drawn by us. We drew a total of $1,029,381 under the lease agreement. The lease is collateralized by the underlying equipment. At the conclusion of the lease term, the equipment may be purchased for fair value at that time, re-marketed by the lessor, or re-leased by us.

In October 2000, we financed $151,249 of laboratory equipment through an equipment vendor under a capital lease agreement. Under the terms of the agreement, we are required to make monthly payments of $4,839 over three years, including effective interest at approximately 9% per annum.

Future installments of debt principal on capital lease obligations are as follows:

Year Ending December 31:	Amount

2002	$ 654,434
2003	315,355
2004	148,350
	$1,118,139

Additionally, under our current capital lease obligations arrangements, we will be obligated to pay approximately $69,000 in interest.

7. REVENUE FROM GRANTS

From 1991 to 1995, we received funding in the form of two Small Business Innovative Research Grants (or SBIR) from the National Institutes of Health. A Phase 1 grant was initiated in September 1991 and a Phase 2 grant was initiated in August 1993. In July 1995, both grants were completed and no additional funds were due or collected. We have received an aggregate of $497,128 from the two SBIR grants. No additional grants have been received.

8. DEFERRED REVENUE

We had deferred revenue of $258,887 classified as other non-current liabilities in our balance sheet at December 31, 2001. During 2001 we received initial payments of $300,000 from two licensing agreements that we have between our functional genomic business segment and Pfizer, Inc. Under these agreements, we out-licensed certain technology to Pfizer for investigating potential drug targets. We may receive additional payments from Pfizer if they achieve certain milestones as defined in the agreements. In accordance with our revenue recognition policy these initial payments will be recognized as revenue over a three-year period from the date of inception of the respective agreement. Accordingly, we recognized licensing revenue of $36,113 during 2001.

9. INCOME TAXES

We did not provide any current of deferred federal or state income tax provision or benefit for the period presented because we have experienced operating losses since our inception. Significant components of the income tax benefit are as follows:

	YEAR ENDED DECEMBER 31,		
	1999	2000	2001
Current:			
Federal	$ -	$ -	$ -
State	800	800	1,600
Foreign	-	-	-
	$ 800	$ 800	$ 1,600
Deferred:			
Federal	$ -	$ -	$ -
State	-	-	-
Foreign	-	-	-
	$ -	$ -	$ -

The following is a reconciliation from the statutory federal income tax rate to our effective tax rate for income taxes:

	1999	2000	2001
Federal statutory tax rate	$ (6,075,765)	$ (10,042,749)	$ (6,595,
Non-utilization of net operating losses	6,075,765	10,042,749	6,595,
Effective tax rate	$ -	$ -	$

Significant components of our deferred tax assets and liabilities as of December 31, 2000 and 2001 are shown below. A valuation allowance has been recognized to fully offset the net deferred tax assets as of December 31, 2000 and 2001 as realization of such assets is uncertain.

DEFERRED TAX ASSETS:	2000	2001
Net operating loss and business credit carryforwards	$ 29,380,902	$ 39,075,
DEFERRED TAX LIABILITIES:		
Depreciation and amortization differences	681,587	735,
NET DEFERRED TAX ASSETS	$ 28,699,315	$ 38,339,
VALUATION ALLOWANCE FOR DEFERRED TAX ASSETS	$ (28,699,315)	$ (38,339,
	$ -	$

At December 31, 2001 we had federal and California income tax loss carryforwards of $66,904,774 and $34,734,529, respectively. The federal and California tax loss carryforwards will begin to expire in 2009 and 2001, respectively, unless previously utilized. The Tax Reform Act of 1986 limits the use of net operating loss carryforwards in the case of an "ownership change" of a corporation. Any ownership changes, as defined, may restrict utilization of our carryforwards. As of December 31, 2001, we had foreign loss carryforwards of $36,686,337.

10. COMMITMENTS AND CONTINGENCIES

Facility and Equipment Leases

We lease certain facilities for our research and development and administrative functions and its subsidiaries. Certain leases also require scheduled annual fixed rent increases, payments of property taxes, insurance and maintenance. Our functional genomics segment sub-leases a facility from its collaboration partner (see "Joint Venture" below) that requires us to pay 50% of the lease payments plus any shortfall by our collaboration partner. In 2001, we

paid approximately 85% of the minimum lease requirements under this lease representing a contingent rental incurred in excess of our 50% commitment of approximately $102,000 in 2001. The minimum lease requirements below include 100% of the minimum lease requirements to be made under this lease. In addition, we lease certain office and telephone equipment under non-cancelable operating leases.

Minimum lease requirements for each of the next five years and thereafter under the property and equipment leases are as follows:

Year ending December 31:	Amount
2002	$ 1,049,400
2003	944,200
2004	681,600
2005	405,800
2006	171,500
	$ 3,252,500

Rent expense for the years ended December 31, 1999, 2000 and 2001 aggregated approximately, $601,100, $637,000, and $808,000 respectively.

Research and Fellowship Grants

At December 31, 2001, we had committed to pay approximately $419,000 during 2002 and an aggregate of approximately $528,000 from 2003 through 2005, principally to the University of California, Irvine to conduct general scientific research programs. Grant expense for 1999, 2000 and 2001 was approximately $617,000, $1,309,000, and $822,000 respectively, and is included in research and development on the consolidated statement of operations.

Licensing agreements

We purchased licenses to further develop certain therapeutic compounds. We are contingently liable for certain milestone payments to the licensor if we reach certain development milestones. We have not reached any milestones and cannot determine when or if ever a milestone will be reached. If we reach a milestone, it will likely occur prior to revenues being generated from the related compound.

Joint Venture

In September 1999, we entered into a three-year joint venture agreement with the University of California, Irvine (or UCI) to assist in the marketing and commercialization of discoveries made by certain members of its functional genomics science department. We are obligated under the agreement to fund the joint venture for three years with minimum payments of $2.0 million over the life of the agreement. As of December 31, 2001 no obligation remains under this minimum obligation. The agreement is cancelable by either UCI or us upon giving thirty days notice. We have the right of first refusal to acquire the licensing rights to any new discoveries and UCI retains ownership rights to all

discoveries under the agreement.

Employment Agreements

We entered into employment agreements with certain of our key executive personnel. The agreements provide for, among other things, guaranteed severance payments equal to up to twice the officer's annual base salary upon the termination of employment without cause or upon a change in control under certain circumstances.

Litigation

We are involved in one matter of litigation considered normal to our business. It is our policy to accrue for amounts related to legal matters if it is probable that a liability has been incurred and an amount is reasonably determinable. We believe that the outcome of this matter will not materially impact our financial position.

11. MINORITY INTEREST IN CONSOLIDATED SUBSIDIARIES

The Minority Interest in Consolidated Subsidiaries shown in the accompanying balance sheet represents the investments by outside parties in our consolidated subsidiaries. The minority interest in consolidated subsidiaries' net loss amounting to $1,463,597 and $48,453 in 2000 and 2001, respectively, in the accompanying consolidated statements of operations consists primarily of the amortization of beneficial conversion feature and dividends on convertible preferred stock issued by our NeoGene and net losses attributable to the minority interest holders. As of December 31, 2001, the minority holders had no net equity, therefore, we are currently recording 100% of our majority owned subsidiaries net losses.

12. STOCKHOLDERS' EQUITY

Revenue Participation Units

In 1988 and 1989, we raised $676,000 in private placement funds from the issuance of seventy-five Revenue Participation Units (or RPU's) at prices ranging from $9,000 to $10,000 per RPU. RPUs entitled holders to receive cash payments based on a stipulated percentage of revenues. RPU holders were entitled to convert to common stock at any time. We had the option to redeem the RPU's subject to certain conditions by paying cash or in exchange for common stock.

In July 1996, the RPU holders and we agreed to convert all 75 RPUs into 300,000 shares of our common stock.

Stock Split

In June 1996, our Board of Directors authorized, with stockholder approval, a reverse split of our outstanding common stock on the basis of 1 share for each 2.5 shares of then outstanding common stock. Our

Board of Directors also authorized, with stockholder approval, an increase in the authorized common stock from 10 million to 25 million shares and the creation of a new class of preferred stock with the authorization to issue up to 5 million shares of such preferred stock. All references to common stock amounts and loss per share in the accompanying financial statements give effect to the reverse stock split. On April 6, 2001, in a special meeting, our stockholders

approved an increase in the authorized common stock from 25 million to 50 million shares.

Re-incorporation

During June 1997, our stockholders approved our re-incorporation as a Delaware corporation. In connection therewith, a par value of $0.001 per share was assigned to our common stock. The total number of authorized and issued shares remained unchanged.

Deferred compensation expense

NeoTherapeutics

We granted 1,352,000 stock options to employees in 2000 with exercise prices less than the fair value of our common stock at the measurement date. The intrinsic value of the option grants amounting to $959,850 was recorded as deferred compensation and is being amortized to expense over the vesting period, in accordance with APB Opinion No. 25. During 2001, we recorded compensation expense of $641,332 as a result of such amortization.

NeoGene

We issued 140,654 stock options of our majority owned subsidiary NeoGene to our employees in 2001 with exercise prices less than the fair market value of NeoGene's common stock at the measurement date. The intrinsic value of the option grants amounting to $2,391,118 was recorded as deferred compensation and is being amortized to expense over the vesting period, in accordance with APB Opinion No. 25. During 2001, we recorded compensation expense of $820,008 as a result of such amortization.

Preferred, Common Stock, and Warrant transactions

During 1993, we issued 40,000 shares of common stock at the fair market value on the date of issuance of $1.35 per share to a financial consultant in exchange for $54,000 of investment banking services.

During 1994, we sold 13,000 shares of restricted common stock at $2.50 per share through a private placement for $32,500 in cash to three investors. During 1995, we sold 22,000 shares of restricted common stock at $2.50 per share through a private placement for $55,000 in cash to six investors. During 1996, we sold 266,800 shares of restricted common stock at $2.50 per share through a private placement for $633,650 in cash.

In June 1996, we filed a registration statement with the Securities and Exchange Commission offering to the public 2,500,000 units (or the Units). Each Unit consisted of one share of our common stock and one warrant to purchase one share of our common stock. The registration statement became effective on September 26, 1996, and on October 1, 1996, we sold all of the Units in exchange for $17,363,003 in cash proceeds, net of public offering costs. On October 11, 1996, the principal underwriter of the offering exercised a portion of its overallotment option and purchased from us 200,000 Units in exchange for $1,389,280 in cash, net of transaction costs. The Units separated immediately following issuance and the common stock and warrants that made up the Units traded as separate securities. The warrants expired in September 2001.

On March 27, 1998, we executed a $15 million Private Equity Line of Credit Agreement (the "Equity Line Agreement") with a private investor that provides for minimum and maximum puts ranging from $250,000 to $2.0 million, depending on our stock price and trading volume. At the time of each put, the investor receives a discount of 12% from the then current average market price, as determined under the Equity Line Agreement. Pursuant to the Equity Line

Agreement, we also issued to the investor warrants to purchase 25,000 shares of our common stock at an exercise price of $11.62 per share. Under the Equity Line Agreement, we received proceeds of approximately $3.55 million from sales of 506,049 shares of our common stock in 1998, $1.95 million from sales of 211,393 shares of our common stock in 1999, and during January 2000, we received $2.0 million from the sale of 186,961 shares of our common stock. The agreement expired in February 2001.

On August 31, 1998, certain of our officers and directors exercised non-qualified stock options and purchased 62,000 shares of our common stock. The exercise price of the stock options was at $4.50 per share for 50,000 shares and $5.13 per share for 12,000 shares for an aggregate purchase price of $286,560, represented by notes issued by the purchasers. The notes are full recourse promissory notes bearing interest at 7% per annum, and are collateralized by the stock issued upon the exercise of the stock options. Interest and principal are payable two years after the issue dates. The notes are included as a component of equity in the financial statements.

On May 31, 1999, we sold to a group of private investors 400,000 shares of our common stock for $4.0 million in cash. The investors also received five-year warrants to purchase 80,000 shares of our common stock at an exercise price of $15 per share.

On July 27, 1999, we completed a secondary public offering and sold 1,150,000 shares of our common stock, including the underwriters' overallotment, for $8.7 million in cash, net of offering costs.

On November 30, 1999, we sold to two private investors, 845,594 shares of our common stock, for $9.4 million in cash, net of offering costs, and warrants to purchase 126,839 shares of our common stock at $14.24 per share. Based on a reset formula contained in the agreement, in March 2000 we issued to the investors 43,383 additional shares of our common stock for no additional consideration. The investors waived a second reset as partial consideration under a different financing transaction.

On December 15, 1999, we entered into a settlement agreement for a previous litigation matter. Under the terms of the settlement, the shareholder forfeited 678,835 shares of common stock and warrants valued at $1,697,090 and we issued 332,630 shares of common stock and warrants valued at $4,155,449. We charged the difference of $2,456,359 to operations.

On February 25, 2000 we sold to two private investors 520,324 shares of our common stock for $8.0 million in cash. The investors also received five-year warrants to purchase 104,000 shares of our common stock at the price of $21.00 per share.

On April 6, 2000, we entered into a financing transaction with two private investor groups. The transaction consisted of (a) $10 million in 5% subordinated convertible debentures due April 6, 2005, (b) redeemable warrants to purchase up to 4 million shares of our common stock over a two year period and (c) five-year warrants to purchase from 115,000 shares up to 265,000 shares of our common stock at an exercise price of $19.67 per share. The redeemable warrants can be redeemed in part by us as frequently as several times per week, subject to average daily volume restrictions and if the market price of our common stock is above $5.00 per share and, when called for redemption, can be exercised by the investor at 97% of the per share closing market price (i.e., a discount of 3%) and are exercisable at the sole option of the investors at the

price of $33.75 per share. During 2000, the investor converted the $10 million of debentures into 1,555,409 shares of our common stock plus 38,768 shares of our common stock in payment of accrued interest. Also in 2000, we called and the investors exercised 586,400 of our redeemable warrants for 586,400 shares of our common stock in exchange for $5,120,654 in cash. At both December 31, 2000 and 2001, there were 3,413,600 redeemable warrants outstanding. The warrants expire in June 2002.

On May 1, 2000 we completed a private placement of 500,000 shares of our common stock for $7.0 million in cash. The investors also received five-year warrants to purchase 125,000 shares of our common stock at an exercise price of $17.50 per shares.

On September 21, 2000, we sold 111,110 shares of Series A convertible preferred stock of our majority owned subsidiary, NeoGene, for $5 million and a five-year warrant to purchase up to (i) 80,000 shares of our common stock at an exercise price of $10.47 per share and (ii) 22,676 shares of NeoGene common stock at an exercise price of $45.00 per share. The fair market value of the warrant was estimated at $411,040 on the date of issuance using the Black-Scholes option pricing model with the following assumptions: dividend yield of 0 percent; expected volatility of 74.97 percent; risk free interest rate of 6.01 percent; and an expected life of five years. The fair value of the warrant was estimated at $540,301 on the date of issuance using the Black-Scholes option pricing model with the following assumptions: dividend yield of 0 percent; expected volatility of 74.97 percent; risk free interest rate of 5.93 percent; and an expected life of three years. On August 13, 2001, NeoTherapeutics purchased the Series A Preferred Stock of NeoGene for $5.5 million representing the $5.0 million face value of the preferred stock plus a $500,000 redemption fee. The difference of approximately $0.8 million between the book value of the preferred stock and the amount paid was recorded as a charge to accumulated deficit. We also paid accrued dividends of approximately $220,000 to the holders of the preferred stock.

On September 29, 2000, we entered into an agreement to sell 968,524 shares of our common stock to two private investors for $8 million cash and a five-year warrant to purchase 193,706 shares of our common stock at $10.13 per share. The fair value of the warrant was estimated at $847,657 on the date of issuance using the Black-Scholes option pricing model with the following assumptions: dividend yield of 0 percent; expected volatility of 74.97 percent; risk free interest rate of 5.88 percent; and an expected life of five years. The agreement contains a reset formula which provides for the investor to obtain at nominal cost, additional shares of our common stock based on the market price of our common stock determined thirty and sixty days after the effective date of the

registration statement to be filed for this transaction. On January 30, 2001, the first vested period ended which resulted under the reset formula in the issuance of 1,070,336 shares of our common stock to the investors. As part of the April 17, 2001 transaction described below, we agreed to issue an additional 900,000 shares of our common stock to the investors under the second and final reset under the agreement. We received no proceeds upon the investors' exercise of the resets.

On December 18, 2000, we entered into an agreement between our majority owned subsidiary, NeoGene, and an institutional investor for the issuance and sale of NeoGene Series B convertible preferred stock and warrants for aggregate

consideration of $2.0 million. Under the provisions of the agreement, we issued and sold to the investor a total of 44,445 shares of NeoGene Series B Convertible Preferred Stock, at a purchase price of $45 per share, and issued a five-year warrant to purchase a total of 9,387 shares of NeoGene common stock, at an exercise price of $45 per share. The fair value of the warrant was estimated at $250,351 on the date of issuance using the Black-Scholes option pricing model with the following assumptions: dividend yield of 0 percent; expected volatility of 88.96 percent; risk free interest rate of 5.14 percent; and an expected life of three years. The investor also received a five-year warrant to purchase an aggregate of 30,000 shares of our common stock, at an exercise price of $6.10 per share. The fair value of the warrant was estimated at $101,700 on the date of issuance using the Black-Scholes option pricing model with the following assumptions: dividend yield of 0 percent; expected volatility of 88.96 percent; risk free interest rate of 5.10 percent; and an expected life of five years. We also granted an exchange right to the investor that will allow the investor to exchange its shares of NeoGene Series B Preferred for our preferred stock. The exchange right grants the investor the right, at its option, at any time and from time to time after June 18, 2001, to exchange all or a portion of the NeoGene Series B Preferred shares then held by the investor for a number of shares of our designated convertible preferred stock. In June 2001, the investor exercised its right to exchange all of the NeoGene Series B Preferred stock then held by the investor for 200 shares of our 7% Series C convertible Preferred stock. Under the terms of the exchange right, the investor forfeited 4,693 or 50% of the previously granted five-year warrants to purchase shares of NeoGene common stock at an exercise price of $45 per share. The shares of our 7% Series C Preferred Stock were redeemable, under certain conditions at the option of the holder, and each share is convertible into a number of shares of our common stock equal to $10,000 divided by the lesser of (i) 100% of the average of the lowest seven closing bid prices of our common stock in the previous 30 trading days, or (ii) $5.97. In August 2001, the holder of our 7% Series C Preferred Stock converted 170 shares of our 7% Series C Preferred Stock into 485,591 shares of our common stock. In September 2001, we purchased the remaining 30 shares of our 7% Series C Preferred Stock for $300,000 plus accrued dividends and a settlement fee of approximately $72,000. The 30 shares of our 7% Series C Preferred Stock are recorded as an offset to Stockholders' Equity.

On January 25, 2001, we issued to a vendor in settlement of our obligation to them, 50,000 shares of our common stock and a five-year warrant to purchase 50,000 shares of our common stock at $3.50 per share.

On January 30, 2001, we issued to two investors 1,070,336 shares of our common stock under the first reset provision contained in the adjustable warrants issued in connection with the September 29, 2000 sale of 968,524 shares of our common stock for $8 million. On May 15, 2001 we also issued an additional 900,000 shares of our common stock to the two investors in respect of the second and final reset provision. We did not receive any consideration as a result of issuing shares of our common stock pursuant to the reset provisions of this financing transaction. The reset provisions were part of an earlier sale of our common stock and were previously accounted for as a partial allocation of the proceeds of that sale to common stock. As such, no further accounting was necessary on the date the reset provision was exercised.

On February 2, 2001, we sold 1,627,756 shares of our common stock under the shelf registration statement to a private investor for $3.5 million in cash.

On March 8, 2001, we sold 1,250,000 shares of our common stock under the shelf registration statement to a private investor for $5 million in cash. The investor also received five-year warrants to purchase up to 125,000 shares of our common stock at the exercise price of $5.00 per share.

On April 17, 2001, we entered into a financing transaction with two private investor groups which provide, among other things, for (a) the sale of

approximately 1,176,472 shares of our common stock under the shelf registration statement for $6.0 million cash, (b) an option to place with the investor groups two tranches of convertible debenture notes of $10 million and $8 million within approximately 30 days and seven months of the initial closing, respectively, at our option, and (c) five-year warrants exercisable at 125% of the market price of the date of the respective closing of each of the aforementioned debenture issuances for a number of shares equal to

20% of the number of shares into which the debentures are initially convertible. We did not exercise the first option for the debenture tranche of $10 million and paid a break-up fee of $405,000 in July 2001, pursuant to the terms of the financing transaction of May 17, 2001. This fee was charged to general and administrative expense in the second quarter of 2001. On November 13, 2001, we decided not to exercise the second option for the debenture tranche of $8 million, pursuant to the April 17, 2001 financing transaction, as amended.

On May 17, 2001, we sold to the aforementioned two private investor groups 1,400,000 shares of our common stock under the shelf registration statement for $5.95 million cash. The investors also received five-year warrants to purchase up to 280,000 shares of our common stock at an exercise price of $6.00 per share.

On June 22, 2001, we sold to our employees through our Employee Stock Purchase Plan (or ESPP), 40,390 shares of our common stock for approximately $90,100. Pursuant to the ESPP, the shares were sold at a 15% discount to market on the date of purchase.

On August 14, 2001, we sold 600,000 shares of our common stock under the shelf registration statement to an institutional investor for $2,010,000.

On June 12, 2001, we entered into two securities sales agreements with an investment banking firm acting as an underwriter to sell our common stock on a "best efforts" basis with the maximum aggregate public offering price under both agreements combined of $33.4 million. The securities were offered as part of a Controlled Equity Offering, or CEO(SM). Under one of the sales agreements, we may sell up to $8.4 million of our common stock "at the market" or directly into the established trading market for our common stock. Under the other sales agreement, we may sell up to $25 million of our common stock in any manner other than "at the market". Under each agreement, if we and the underwriter agree to sell our common stock on certain terms, the underwriter will use its commercially reasonable efforts to sell our securities up to the amount agreed upon, but will not be required to sell any specific number or dollar amount of our securities. The net proceeds from the sales will be the aggregate sales price at which our securities were sold after deduction for the underwriter's commission/discount of up to 4%. We will issue to the underwriter five-year warrants to purchase shares of our common stock in an amount equal to 10% of the number of shares of common stock sold by us pursuant to the offering at an exercise price per share equal to 130% of the volume weighted average price at which such shares were issued. On October 19, 2001, we and the investment banking firm executed amendments to the sales agreements previously entered into by the investment banking firm and us on June 12, 2001, and to the advisory agreement previously entered into on April 11, 2001 and amended on June 12, 2001. The amendments relate primarily to modifications of the compensation provisions of the sales agreements. Through placement notices under each sales agreement, during October and November of 2001, 949,710 shares of our common

stock were sold pursuant to the $25 million sale agreement for aggregate cash proceeds of $3.8 million and approximately 124,800 shares of our common stock were sold pursuant to the $8.4 million sale agreement for aggregate cash proceeds of $0.4.

On December 10, 2001, we sold to certain institutional investors 519,480 shares of our common stock under the shelf registration statement for cash proceeds of approximately $2.0 million.

On December 13, 2001, under a second placement notice related to the aforementioned $25 million sales agreement, we sold 246,883 shares of our common stock for aggregate cash proceeds of approximately $1.0 million.

On December 21, 2001, we sold to our employees through our Employee Stock Purchase Plan (or ESPP), 23,513 shares of our common stock for $67,953. Pursuant to the ESPP, the shares were sold at a 15% discount to market on the date of purchase.

13. STOCK BASED COMPENSATION

We have three stock option plans: the 1991 Stock Incentive Plan (or the 1991 Plan), the 1997 Stock Incentive Plan (of the 1997 Plan) and the 2000 NeoGene Stock Incentive Plan (or the 2000 NeoGene Plan) (collectively, the Plans). The Plans were adopted by stockholders and Board of Directors in May 1991, June 1997, and August 2000, respectively, and provide for the granting of incentive and nonqualified stock options as well as other stock-based compensation. The Plans provide for issuance of incentive stock options having exercise prices equal to the fair market values of the stock on the date of grant of the options or, in certain circumstances, at option

prices at least equal to 110% of the fair market value of the stock on the date the options are granted. Options granted under the Plans are exercisable in such a manner and within such period, not to exceed ten years from the date of the grant, as shall be set forth in a stock option agreement between the director, officer or employee and us. Under the Plans, shares of common stock may be granted to directors, officers and employees, except that incentive stock options may not be granted to non-employee directors. The 1991 Plan, as amended, authorizes for issuance up to 401,430 shares of our common stock. The 1997 Plan, as amended, authorizes for issuance up to 3,000,000 shares of our common stock of which all had been granted at December 31, 2001. The 2000 NeoGene Plan authorizes for issuance up to 250,000 shares of NeoGene common stock.

A summary of our stock option activities for the 1991 Plan and 1997 Plan are as follows:

	1999		2000		
	SHARES	WEIGHTED AVERAGE EXERCISE PRICE	SHARES	WEIGHTED AVERAGE EXERCISE PRICE	SHARE
Outstanding at beginning of					

year	853,873	$5.78	1,389,373	$6.77	2,490,
Granted	543,500	$10.76	1,358,000	$7.04	721,
Exercised	(1,900)	$6.57	(122,598)	$2.85	
Forfeited	(6,100)	$8.08	(134,600)	$8.78	(294,
Outstanding, at end of year	1,389,373	$6.77	2,490,175	$8.34	2,916,
Exercisable, at end of year	662,823	$3.23	745,758	$3.80	1,610,

The following table summarizes information about stock options outstanding under the 1991 Plan and 1997 Plan at December 31, 2001:

RANGE OF EXERCISE PRICE	OPTIONS OUTSTANDING AT 12/31/01	WEIGHTED AVERAGE REMAINING LIFE	WEIGHTED AVERAGE EXERCISE PRICE	OPTIONS EXERCISABLE 12/31/01	WE A EXER
$2.14 - $3.64	161,500	9.77	$2.95	4,500	
$3.650 - $5.625	1,344,600	8.78	$4.10	733,150	
$5.626 - $8.874	492,075	7.37	$6.83	332,900	
$8.875 - $13.00	918,800	7.84	$11.09	539,517	
	2,916,975			1,610,067	

A summary of our stock option activities for the 2000 NeoGene Plan is as follows:

	2001	
	SHARES	WEIGHTED AVERAGE EXERCISE PRICE
Outstanding at beginning of year	-	-
Granted	140,654	$1.16
Exercised	-	-
Forfeited	(3,000)	$1.00
Outstanding, at end of year	137,654	$1.16
Exercisable, at end of year	-	-

The following table summarizes information about stock options outstanding under the 2000 NeoGene Plan at December 31, 2001:

EXERCISE PRICE	OPTIONS OUTSTANDING AT 12/31/01	WEIGHTED AVERAGE REMAINING LIFE	WEIGHTED AVERAGE EXERCISE PRICE	OPTIONS EXERCISABLE 12/31/01	WE A EXER
$1.00	135,654	9.00	$1.00	-	
$18.00	2,000	9.33	$18.00	-	
	137,654			-	

We apply APB Opinion No. 25 and related interpretations in accounting for stock options granted to employees, and do not recognize compensation expense when the exercise price of the options equals the fair market value of the underlying shares at the date of grant. Directors' stock options are treated in the same manner as employee stock options for accounting purposes. Under SFAS No. 123, the Company is required to present certain pro forma earnings information determined as if employee stock options were accounted for under the fair value method of that statement.

The fair value of each option grant is estimated on the date of grant using the Black-Scholes option pricing model with the following weighted average assumptions used for grants in 1999, 2000 and 2001, respectively: risk-free interest rates of 5.80 percent (1999); 5.90 percent (2000); and 4.22 percent (2001), zero expected dividend yields; expected lives of 5 years; expected volatility of 75.44 percent in 1999; 90.72 percent in 2000; and 87.58 percent in 2001.

For purposes of the following required pro forma information, the weighted average fair value of stock options granted in 1999, 2000 and 2001 was $7.57, $5.31, and $2.65, respectively. The total estimated fair value is amortized to expense over the vesting period.

	1999	2000	2001
Pro forma net loss	$ (27,414,976)	$ (49,050,557)	$(32,142,737)
Pro forma basic and diluted loss per share	$ (3.82)	$ (4.61)	$ (1.63)

Warrants are typically issued by the Company to investors as part of a financing transaction, or in connection with services rendered by outside consultants and expire at varying dates ranging from September 2001 through November 2004. A summary of warrant activity follows:

	1999		2000		
	COMMON SHARES	WEIGHTED AVERAGE EXERCISE PRICE	COMMON SHARES	WEIGHTED AVERAGE EXERCISE PRICE	COMMON SHARES

Outstanding, at beginning of year	2,697,459	$11.38	3,217,123	$11.95	4,140,18
Granted	528,664	$13.41	927,556	$16.76	1,192,56
Exercised	(9,000)	$11.40	(4,490)	$11.40	
Forfeited (1)	-	-	-	-	(2,735,51
Outstanding, at end of year	3,217,123	$11.95	4,140,189	$13.57	2,597,24

(1) Expiration of public warrants that were issued at time of initial public offering.

The following table summarizes information about warrants outstanding at December 31, 2001:

EXERCISE PRICE	WARRANTS OUTSTANDING AT 12/31/01	WEIGHTED AVERAGE REMAINING LIFE	WEIGHTED AVERAGE EXERCISE PRICE	WARRANTS EXERCISABLE 12/31/01	WE A EXER
$3.50 - $5.50	682,139	4.67	$4.34	557,139	
$5.51 - $7.43	333,459	4.19	$6.07	53,459	
$7.44 - $10.47	273,706	3.74	$10.23	-	
$10.48 - $13.00	132,632	1.98	$12.68	56,631	
$13.01 - $15.00	462,312	3.20	$14.79	335,473	
$15.01 - $17.50	260,000	3.04	$16.72	260,000	
$17.51 - $19.67	314,000	3.26	$19.67	-	
$19.68 - $21.00	139,000	3.08	$20.91	35,000	
	2,597,248			1,297,702	

The preceding table excludes the Class B warrants that are callable at our option and subject to certain terms described in Note 12. Stockholders' Equity,under the subtitle, "Preferred, Common Stock, and Warrant transactions".

On September 1, 2000, we granted and our Board of Director approved 250,000 stock options to purchase shares of our common stock at an exercise price of $6.0625 per share to one of our officers. This agreement was amended on February 12, 2001, which revised certain of the vesting milestones noted below. 100,000 of these options vest ratably over two years. 100,000 of these stock options vest in two tranches of 50,000 on a day when the market closing price of our common stock is equal to or greater than $6.00 and $9.00 per share, respectively. The remaining tranche of 50,000 stock options vests on the earlier of certain milestones being reached, one of which is a day when the market closing price of our common stock is equal to or greater than $12.00.

An additional 1,316,000 options with an exercise price of $3.00 per share were granted, subject to shareholder approval, to employees, officers, and directors on October 9, 2001.

We issued to various consultants stock options that are not associated with any of the aforementioned Plans (Non-Plan Options). During the period from December 1993 through December 1996, we issued to two scientific consultants and a financial consultant in exchange for past and future services a total of 194,000 Non-Plan Options to purchase common stock at an exercise price of $0.025 per share. As the exercise price was lower than the fair market value of the stock on the date the options were granted, compensation expense was recorded for the difference between the option exercise price and the estimated fair market value of the stock as determined by our Board of Directors on the grant date. All of these Non-Plan Options were vested and exercisable upon issuance.

We issued to a consultant 180,000 Non-Plan Options in 1997 at an exercise price of $3.875 per share, of which 30,000 vested immediately. In 1998, we issued to the same consultant an additional 25,000 Non-Plan Options at an exercise price of $8.5625 per share, all of which vested immediately. Compensation expense related to these options grants that vested immediately was recorded in the respective year of grant. The remaining 150,000 stock options granted in 1997 did not vest and no compensation expense was recorded.

In September 1990, we issued to our Chief Executive Officer a warrant to purchase 88,173 shares of our common stock at $3.75 per share. The Chief Executive Officer exercised the warrant in August 2000 by delivery of a promissory note payable to us (See footnote 3, Related Party Transactions).

14. DEFINED CONTRIBUTION PENSION PLAN

We established a 401(k) Salary Deferral Plan on January 1, 1990. This plan allows eligible employees to defer part of their income on a tax-free basis. Contributions by us to this plan are discretionary upon approval by our Board of Directors. As of December 31, 2001, we have not made any contributions into this plan.

15. EMPLOYEE STOCK PURCHASE PLAN

In January 2001, we adopted the NeoTherapeutics Employee Stock Purchase Plan (or the ESPP). The ESPP is subject to the provisions of Section 423 of the Internal Revenue Code offers to our eligible employees, on a tax-advantaged basis, the opportunity to purchase shares of our common stock, at a discount, through payroll deductions. The ESPP allows the participant to deduct up to a specified maximum percentage of their gross income each pay period. Under the ESPP, our common stock will be offered during the six month offering periods commencing on each June and December. Under the ESPP, shares of our common stock are purchased, for those employees who chose to participate, automatically, at a purchase price equal to 85% of the lesser of (i) the fair market value of our common stock on the first trading day of an offering period and (ii) the fair market value of our common stock on the last trading day of an offering period.

16. SEGMENT INFORMATION

We are organized in two business segments: pharmaceutical and functional genomics. Our pharmaceutical business segment engages in the discovery and development of novel drugs to treat significant medical diseases or indications associated with nervous system disorders and cancer. Our functional genomics business segment is involved in determining the function and purpose of human genes for the purpose of discovering drugs that combat diseases associated with these genes. The information shown below for our pharmaceutical business segment represents the accounts of NeoTherapeutics, NeoOncoRx and all of our wholly owned subsidiaries. The information shown below for our functional

genomics business segment represents the accounts of our majority owned subsidiary NeoGene. Summary intercompany transactions and balances are not shown. Intercompany transactions include primarily cash loaned and general and administrative services rendered by our pharmaceutical segment to our functional genomics segment. The allocation of general and administrative services is carved out from our pharmaceutical business based on our best estimates but may not be indicative of the cost of these services if they had been rendered by an independent third party. The information below represents amounts that are included in the measure of segment operating results that are reviewed by our management.

PHARMACEUTICAL BUSINESS FINANCIAL INFORMATION (IN THOUSANDS):

STATEMENT OF OPERATIONS DATA FOR THE YEARS ENDED DECEMBER 31:	1999	2000	2001	INCEPT 20
Revenues	$ -	$ -	$ -	$
Operating expenses:				
Research and development	19,873	38,131	18,469	9
General and administrative	3,438	4,643	6,302	2
Settlement of litigation	2,458	-	-	
Loss from operations	(25,769)	(42,774)	(24,771)	(11
Other income (expense)	(9)	(1,080)	152	
Minority interest in consolidated subsidiaries' net loss	-	(1,464)	(48)	(
Net loss	$ (25,778)	$ (45,318)	$ (24,667)	$ (11

BALANCE SHEET DATA AT DECEMBER 31:	1999	2000	2001
Capital expenditures	$ 430	$ 844	$ 1,045
Property and equipment, net	3,161	3,416	3,691
Total assets	$ 13,172	$ 10,317	$ 9,676

FUNCTIONAL GENOMICS BUSINESS FINANCIAL INFORMATION (IN THOUSANDS):

STATEMENT OF OPERATIONS DATA FOR THE YEARS ENDED DECEMBER 31:	1999	2000	2001	INCEPT 200
Revenues	$ -	$ -	$ 41	$
Operating expenses:				
Research and development	185	636	2,142	
General and administrative	27	464	1,278	
Loss from operations	(212)	(1,100)	(3,379)	(

Other income (expense)	-	(10)	211	
Net loss	$ (212)	$ (1,110)	$ (3,168)	$ (

BALANCE SHEET DATA AT DECEMBER 31:	1999	2000	2001
Capital expenditures	$ -	$ -	$1,024
Property and equipment, net	-	-	998
Total assets	$ 2	$5,464	$3,149

CONSOLIDATED FINANCIAL INFORMATION (IN THOUSANDS):

STATEMENT OF OPERATIONS DATA FOR THE YEARS ENDED DECEMBER 31:	1999	2000	2001	INCEPT 20
Revenues	$ -	$ -	$ 41	$
Operating expenses:				
Research and development	20,058	38,767	20,611	9
General and administrative	3,465	5,107	7,580	2
Settlement of litigation	2,458	-	-	
Loss from operations	(25,981)	(43,874)	(28,150)	(12
Other income (expense)	(9)	(2,553)	315	(
Net loss	$ (25,990)	$ (46,427)	$ (27,835)	$ (12

BALANCE SHEET DATA AT DECEMBER 31:	1999	2000	2001
Capital expenditures	$ 430	$ 844	$ 2,069
Property and equipment, net	3,161	3,416	4,689
Total assets	$13,174	$15,781	$12,825

All revenue is domestic licensing except $5,000 that was from a single non-recurring product sale made to a company in Spain. All of our long-lived assets reside in the United States.

17. UNAUDITED QUARTERLY FINANCIAL INFORMATION

The following is a summary of the unaudited quarterly results of operations for each of the calendar quarters ended in the two-year period ended December 31, 2001 (in thousands, except per share data):

Fiscal 2000	March 31	June 30	September 30	December
Revenues	$ -	$ -	$ -	$
Total operating expenses	$ 9,455	$ 11,387	$ 11,778	$ 11,2
Net loss	$ (9,332)	$ (12,346)	$ (13,223)	$ (11,5
Basic and diluted loss per share	$ (1.02)	$ (1.29)	$ (1.27)	$ (0.
Shares used in calculation	9,135	9,536	10,383	13,0

Fiscal 2001	March 31	June 30	September 30	December
Revenues	$ -	$ 8	$ 8	$
Total operating expenses	$ 5,608	$ 6,745	$ 6,217	$ 9,6
Net loss	$ (5,478)	$ (6,643)	$ (5,979)	$ (9,7
Basic and diluted loss per share	$ (0.36)	$ (0.36)	$ (0.39)	$ (0.
Shares used in calculation	15,336	18,510	17,582	20,3

18. SUBSEQUENT EVENTS

On March 12, 2002, we sold 2,575,000 shares of our common stock at $2.00 per share for gross cash proceeds of $5.15 million off of our shelf registration statement. The investors also received warrants to purchase up to 643,750 shares of our common stock at an exercise price of $2.75 per share. Offering costs of this transaction were approximately $230,000.

On March 15, 2002, we sold 525,000 shares of our common stock at $2.00 per share for gross cash proceeds of $1.05 million off of our shelf registration statement. The investors also received warrants to purchase up to 131,250 shares of our common stock at an exercise price of $2.75 per share. Offering costs of this transaction were approximately $130,000.

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

None.

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

The information concerning our directors and executive officers required under this item is incorporated herein by reference from our definitive proxy statement, to be filed pursuant to Regulation 14A, related to our 2002 Annual Meeting of Stockholders to be held on June 17, 2002 (or the 2002 Proxy Statement).

ITEM 11. EXECUTIVE COMPENSATION

The information required under this item is incorporated herein by reference from our 2002 Proxy Statement.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The information required under this item is incorporated herein by reference from our 2002 Proxy Statement.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The information required under this item is incorporated herein by reference from our 2002 Proxy Statement.

ITEM 14. EXHIBITS, FINANCIAL STATEMENT SCHEDULES AND REPORTS ON FORM 8-K

(a)1. CONSOLIDATED FINANCIAL STATEMENTS:

The following are included herein under Item 8:

Report of Independent Public Accountants.

Consolidated Balance Sheet as of December 31, 2000 and 2001.

Consolidated Statement of Operations for the years ended December 31, 1999, 2000 and 2001 and the period from inception through December 31, 2001.

Consolidated Statement of Stockholders' Equity for the period from inception through December 31, 2001.

Consolidated Statement of Cash Flow for the years ended December 31, 1999, 2000 and 2001 and the period from inception through December 31, 2001.

Notes to Consolidated Financial Statements.

(a)2. FINANCIAL STATEMENT SCHEDULES:

None. All financial statement schedules are omitted because they are not applicable or the required information is included in the Consolidated Financial Statements or notes thereto.

(A) 3. EXHIBITS.

EXHIBIT NO.	DESCRIPTION
3.1	Certificate of Incorporation of the Registrant, as filed on May 7, 1997. (Filed as Exhibit B to the Definitive Proxy

	Statement dated May 8, 1997, for the Annual Meeting of Shareholders of NeoTherapeutics Colorado, the predecessor to Registrant, held on June 17, 1997, as filed with the Securities and Exchange Commission on May 9, 1997, and incorporated herein by reference.)
3.1.1+	Certificate of Amendment to the Certificate of Incorporation of the Registrant.
3.1.2	Certificate of Designation of 5% Series A Preferred Stock with Conversion Features. (Filed as Exhibit 4.1 to Form 8-K, as filed with the Securities and Exchange Commission on February 9, 1999, and incorporated herein by reference.)
3.1.3	Certificate of Designation of Rights, Preferences and Privileges of Series B Junior Participating Preferred Stock of the Registrant. (Filed as Exhibit 3.1 to Form 8-A12G, as filed with the Securities and Exchange Commission on December 26, 2000, and incorporated herein by reference.)
3.1.4	Certificate of Designations of the Series C Preferred Stock of the Registrant. (Filed as Exhibit 4.7 to the Registration Statement on Form S-3, as amended (No. 333-64432), as filed with the Securities and Exchange Commission on July 2, 2001, and incorporated herein by reference.)
3.2+	Bylaws of the Registrant, as amended.
4.1+	Form of Warrant issued by the Registrant to Sanford Glasky, dated as of December 15, 1997, to purchase up to 16,631 shares of our common stock.
4.2+	Warrant issued by the Registrant to Leasing Technologies, Inc., dated as of September 9, 1998.
4.3	Registration Rights Agreement dated as of January 29, 1999, by and among the Registrant, Westover Investments L.P. and Montrose Investments Ltd. (Filed as Exhibit 4.3 to Form 8-K, as filed with the Securities and Exchange Commission on February 9, 1999, and incorporated herein by reference.)
4.4	Form of Warrant issued by the Registrant to Westover Investments L.P. and Montrose Investments Ltd., dated as of January 29, 1999. (Filed as Exhibit 4.4 to Form 8-K, as filed with the Securities and Exchange Commission on February 9, 1999, and incorporated herein by reference.)
4.5	Warrant issued by the Registrant to Brighton Capital, Ltd., dated as of January 29, 1999. (Filed as Exhibit 4.13 to the Registration Statement on Form S-3 (No. 333-37180), as filed with the Securities and Exchange Commission on May 16, 2000, and incorporated herein by reference.)
4.6+	Form of Warrant issued by the Registrant to certain investors, dated as of May 11, 1999, to purchase up to an aggregate of 80,000 shares of our common stock.
4.7+	Warrant issued by the Registrant to Stradling Yocca Carlson & Rauth, dated as of May 17, 1999.
4.8	Form of Representative's Warrant issued to Joseph Charles & Associates, Inc., dated as of July 26, 1999, to purchase up to

100,000 shares of our common stock. (Filed as Exhibit 4.12 to the Registration Statement on Form S-1, as amended (No. 333-79935), as filed with the Securities and Exchange Commission on July 21, 1999, and incorporated herein by reference.)

EXHIBIT NO.	DESCRIPTION
4.9	Registration Rights Agreement dated as of November 19, 1999, by and among the Registrant, Strong River Investments, Inc. and Montrose Investments Ltd. (Filed as Exhibit 4.1 to Form 8-K, as filed with the Securities and Exchange Commission on December 7, 1999, and incorporated herein by reference.)
4.10	Closing Warrant issued by the Registrant to Montrose Investments Ltd., dated as of November 19, 1999. (Filed as Exhibit 4.1 to Form 8-K, as filed with the Securities and Exchange Commission on December 7, 1999, and incorporated herein by reference.)
4.11	Closing Warrant issued by the Registrant to Strong River Investments, Inc., dated as of November 19, 1999. (Filed as Exhibit 4.1 to Form 8-K, as filed with the Securities and Exchange Commission on December 7, 1999, and incorporated herein by reference.)
4.12	Warrant issued by the Registrant to Brighton Capital, Ltd., dated as of November 19, 1999. (Filed as Exhibit 4.14 to the Registration Statement on Form S-3 (No. 333-37180), as filed with the Securities and Exchange Commission on May 16, 2000, and incorporated herein by reference.)
4.13	Registration Rights Agreement dated as of February 25, 2000, by and among the Registrant, Montrose Investments Ltd. and Strong River Investments, Inc. (Filed as Exhibit 4.2 to Form 8-K, as filed with the Securities and Exchange Commission on April 3, 2000, and incorporated herein by reference.)
4.14	Closing Warrant issued by the Registrant to Montrose Investments Ltd., dated as of February 25, 2000. (Filed as Exhibit 4.3 to Form 8-K, as filed with the Securities and Exchange Commission on April 3, 2000, and incorporated herein by reference.)
4.15	Closing Warrant issued by the Registrant to Strong River Investments, Inc., dated as of February 25, 2000. (Filed as Exhibit 4.4 to Form 8-K, as filed with the Securities and Exchange Commission on April 3, 2000, and incorporated herein by reference.)
4.16	Warrant issued by the Registrant to Brighton Capital, Ltd., dated as of February 25, 2000. (Filed as Exhibit 4.15 to the Registration Statement on Form S-3 (No. 333-37180), as filed with the Securities and Exchange Commission on May 16, 2000, and incorporated herein by reference.)

4.17	Registration Rights Agreement dated as of April 6, 2000, by and among the Registrant, Strong River Investments, Inc. and Montrose Investments Ltd. (Filed as Exhibit 4.2 to Form 8-K, as filed with the Securities and Exchange Commission on April 21, 2000, and incorporated herein by reference.)
4.18	Class A Warrant issued by the Registrant to Montrose Investments Ltd., dated as of April 6, 2000. (Filed as Exhibit 4.4 to Form 8-K, as filed with the Securities and Exchange Commission on April 21, 2000, and incorporated herein by reference.)
4.19	Class A Warrant issued by the Registrant to Strong River Investments, Inc., dated as of April 6, 2000. (Filed as Exhibit 4.5 to Form 8-K, as filed with the Securities and Exchange Commission on April 21, 2000, and incorporated herein by reference.)
4.20	Class B Warrant issued by the Registrant to Montrose Investments Ltd., dated as of April 6, 2000. (Filed as Exhibit 4.6 to Form 8-K, as filed with the Securities and Exchange Commission on April 21, 2000, and incorporated herein by reference.)

EXHIBIT NO.	DESCRIPTION
4.21	Class B Warrant issued by the Registrant to Strong River Investments, Inc., dated as of April 6, 2000. (Filed as Exhibit 4.7 to Form 8-K, as filed with the Securities and Exchange Commission on April 21, 2000, and incorporated herein by reference.)
4.22	Warrant issued by the Registrant to Brighton Capital, Ltd., dated as of April 6, 2000. (Filed as Exhibit 4.16 to the Registration Statement on Form S-3 (No. 333-37180), as filed with the Securities and Exchange Commission on May 16, 2000, and incorporated herein by reference.)
4.23	Registration Rights Agreement dated as of April 28, 2000, by and among the Registrant, Royal Canadian Growth Fund and Dlouhy Investments Inc. (Filed as Exhibit 4.2 to Form 8-K, as filed with the Securities and Exchange Commission on May 25, 2000, and incorporated herein by reference.)
4.24	Warrant issued by the Registrant to Royal Canadian Growth Fund, dated as of May 1, 2000. (Filed as Exhibit 4.3 to Form 8-K, as filed with the Securities and Exchange Commission on May 25, 2000, and incorporated herein by reference.)
4.25	Warrant issued by the Registrant to Dlouhy Investments Inc., dated as of May 1, 2000. (Filed as Exhibit 4.4 to Form 8-K, as filed with the Securities and Exchange Commission on May 25, 2000, and incorporated herein by reference.)

4.26	Registration Rights Agreement dated as of September 21, 2000, by and among the Registrant, Strong River Investments, Inc. and Montrose Investments Ltd. (Filed as Exhibit 4.4 to Form 8-K, as filed with the Securities and Exchange Commission on November 13, 2000, and incorporated herein by reference.)
4.27	Warrant issued by the Registrant to Montrose Investments Ltd., dated as of September 21, 2000. (Filed as Exhibit 4.7 to Form 8-K, as filed with the Securities and Exchange Commission on November 13, 2000, and incorporated herein by reference.)
4.28	Warrant issued by the Registrant to Strong River Investments, Inc., dated as of September 21, 2000. (Filed as Exhibit 4.8 to Form 8-K, as filed with the Securities and Exchange Commission on November 13, 2000, and incorporated herein by reference.)
4.29	Registration Rights Agreement dated as of September 29, 2000, by and among the Registrant, Strong River Investments, Inc. and Montrose Investments Ltd. (Filed as Exhibit 4.12 to Form 8-K, as filed with the Securities and Exchange Commission on November 13, 2000, and incorporated herein by reference.)
4.30	Closing Warrant issued by the Registrant to Montrose Investments, Ltd., dated as of September 29, 2000. (Filed as Exhibit 4.13 to Form 8-K, as filed with the Securities and Exchange Commission on November 13, 2000, and incorporated herein by reference.)
4.31	Closing Warrant issued by the Registrant to Strong River Investments, Inc., dated as of September 29, 2000. (Filed as Exhibit 4.14 to Form 8-K, as filed with the Securities and Exchange Commission on November 13, 2000, and incorporated herein by reference.)
4.32+	Form of Warrants issued by the Registrant to Brighton Capital, Ltd., dated between September 18, 2000 and May 18, 2001, to purchase up to an aggregate of 130,473 shares of our common stock.

EXHIBIT NO.	DESCRIPTION
4.33	Rights Agreement, dated as of December 13, 2000, between the Registrant and U.S. Stock Transfer Corporation, as Rights Agent, which includes as Exhibit A thereto the form of Certificate of Designation for the Series B Junior Participating Preferred Stock, as Exhibit B thereto the Form of Rights Certificate and as Exhibit C thereto a Summary of Terms of Stockholder Rights Plan. (Filed as Exhibit 4.1 to Form 8-A12G, as filed with the Securities and Exchange Commission on December 26, 2000, and incorporated herein by reference.)
4.34	Registration Rights Agreement dated as of December 18, 2000,

	by and between the Registrant and Societe Generale. (Filed as Exhibit 4.4 to Form 8-K, as filed with the Securities and Exchange Commission on December 28, 2000, and incorporated herein by reference.)
4.35	Warrant issued by the Registrant to Societe Generale, dated as of December 18, 2000. (Filed as Exhibit 4.6 to Form 8-K, as filed with the Securities and Exchange Commission on December 28, 2000, and incorporated herein by reference.)
4.36+	Warrant issued by the Registrant to Brighton Capital, Ltd., dated as of December 18, 2000.
4.37+	Warrant issued by the Registrant to CroMedica Global, Inc., dated as of January 25, 2001.
4.38	Warrant issued by the Registrant to IAT ReInsurance Syndicate Ltd., dated as of March 8, 2001. (Filed as Exhibit 10.2 to Form 8-K, as filed with the Securities and Exchange Commission on March 14, 2001, and incorporated herein by reference.)
4.39	Advisory Agreement dated as of April 11, 2001, by and between the Registrant and Cantor Fitzgerald & Co. (Filed as Exhibit 4.1 to the Registration Statement on Form S-3, as amended (No. 333-64444), as filed with the Securities and Exchange Commission on July 2, 2001, and incorporated herein by reference.)
4.40	Amendment to the Advisory Agreement dated as of June 12, 2001, by and between the Registrant and Cantor Fitzgerald & Co. (Filed as Exhibit 4.2 to the Registration Statement on Form S-3, as amended (No. 333-64444), as filed with the Securities and Exchange Commission on July 2, 2001, and incorporated herein by reference.)
4.41	Amendment to the Advisory Agreement, dated as of October 19, 2001, by and between the Registrant and Cantor Fitzgerald & Co. (Filed as Exhibit 4.1 to Form 8-K, as filed with the Securities and Exchange Commission on October 24, 2001, and incorporated herein by reference.)
4.42	Warrant issued by the Registrant to Montrose Investments Ltd., dated as of May 18, 2001. (Filed as Exhibit 4.1 to Form 8-K, as filed with the Securities and Exchange Commission on May 21, 2001, and incorporated herein by reference.)
4.43	Warrant issued by the Registrant to Strong River Investments, Inc., dated as of May 18, 2001. (Filed as Exhibit 4.2 to Form 8-K, as filed with the Securities and Exchange Commission on May 21, 2001, and incorporated herein by reference.)
4.44+	Form of Warrant issued by the Registrant to Gruntal & Co., L.L.C., dated as of August 10, 2001, to purchase up to 125,000 shares of our common stock.

EXHIBIT NO.	DESCRIPTION
4.45	Form of Warrants issued by the Registrant to Cantor Fitzgerald & Co, dated as of December 6, 2001 and December 13, 2001, to purchase up to an aggregate of 132,139 shares of our common stock. (Filed as Exhibit A to Schedule 1 to Exhibit 1.1 to Form 8-K, as filed with the Securities and Exchange Commission on October 24, 2001, and incorporated herein by reference.)
4.46+	Warrant issued by the Registrant to Jefferies & Company, Inc., dated as of December 13, 2001.
4.47+	Form of Warrant issued by the Registrant to certain purchasers, dated as of March 13, 2002 and March 15, 2002, to purchase up to an aggregate of 795,000 shares of our common stock.
10.1*	1991 Stock Incentive Plan. (Filed as Exhibit 10.2 to the Registration Statement on Form SB-2, as amended (No. 333-05342-LA), and incorporated herein by reference.)
10.2*	Note dated as of June 21, 1996, between the Registrant and Alvin J. Glasky and related Security Agreement dated August 31, 1990. (Filed as Exhibit 10.4 to the Registration Statement on Form SB-2, as amended (No. 333-05342-LA), and incorporated herein by reference.)
10.3*	Addendum to Note dated as of June 21, 1996, between the Registrant and Alvin J. Glasky. (Filed as Exhibit 10.12 to the Form 10-KSB for fiscal year ended December 31, 1996, as filed with the Securities and Exchange Commission on March 31, 1997, and incorporated herein by reference.)
10.4*	Agreement dated as of June 6, 1991, as amended on July 26, 1996, by and between the Registrant and Alvin J. Glasky. (Filed as Exhibit 10.7 to the Registration Statement on Form SB-2, as amended (No. 333-05342-LA), and incorporated herein by reference.)
10.5*	Agreement dated as of June 30, 1991, as amended on July 26, 1996, by and between the Registrant and Alvin J. Glasky. (Filed as Exhibit 10.8 to the Registration Statement on Form SB-2, as amended (No. 333-05342-LA), and incorporated herein by reference.)
10.6*	Form of Indemnification Agreement between the Registrant and each of its officers and directors. (Filed as Exhibit 10.10 to the Registration Statement on Form SB-2, as amended (No. 333-05342-LA), and incorporated herein by reference.)
10.7	Industrial Lease Agreement dated as of January 16, 1997, between the Registrant and the Irvine Company. (Filed as Exhibit 10.11 to the Form 10-KSB for the fiscal year ended December 31, 1996, as filed with the Securities and Exchange Commission on March 31, 1997, and incorporated herein by reference.)
10.8*+	Amended and Restated 1997 Stock Incentive Plan.
10.9	Master Note and Security Agreement between the Registrant and

	Leasing Technologies, Inc. dated as of July 10, 1998. (Filed as Exhibit 4 to Form 10-QSB for the quarter ended September 30, 1998, as filed with the Securities and Exchange Commission on November 9, 1998, and incorporated herein by reference.)
10.10	Securities Purchase Agreement dated as of February 25, 2000, by and among the Registrant, Montrose Investments Ltd. and Strong River Investments, Inc. (Filed as Exhibit 4.1 to Form 8-K, as filed with the Securities and Exchange Commission on April 3, 2000, and incorporated herein by reference.)

EXHIBIT NO.	DESCRIPTION
10.11	Convertible Debenture Purchase Agreement dated as of April 6, 2000, by and among the Registrant, Strong River Investments, Inc. and Montrose Investments Ltd. (Filed as Exhibit 4.1 to Form 8-K, as filed with the Securities and Exchange Commission on April 21, 2000, and incorporated herein by reference.)
10.12	Securities Purchase Agreement dated as of April 28, 2000, by and between the Registrant and Royal Canadian Growth Fund. (Filed as Exhibit 4.1 to Form 8-K, as filed with the Securities and Exchange Commission on May 25, 2000, and incorporated herein by reference.)
10.13	Letter Agreement dated as of May 1, 2000, by and between the Registrant and Royal Canadian Growth Fund. (Filed as Exhibit 4.5 to Form 8-K, as filed with the Securities and Exchange Commission on May 25, 2000, and incorporated herein by reference.)
10.14	Securities Purchase Agreement dated as of September 21, 2000, by and among the Registrant, Strong River Investments, Inc. and Montrose Investments Ltd. (Filed as Exhibit 4.1 to Form 8-K, as filed with the Securities and Exchange Commission on November 13, 2000, and incorporated herein by reference.)
10.15	Registration Rights Agreement dated as of September 21, 2000, by and among NeoGene Technologies, Inc., Strong River Investments, Inc. and Montrose Investments Ltd. (Filed as Exhibit 4.3 to Form 8-K, as filed with the Securities and Exchange Commission on November 13, 2000, and incorporated herein by reference.)
10.16	Warrant issued by NeoGene Technologies, Inc., to Montrose Investments Ltd., dated as of September 21, 2000. (Filed as Exhibit 4.5 to Form 8-K, as filed with the Securities and Exchange Commission on November 13, 2000, and incorporated herein by reference.)
10.17	Warrant issued by NeoGene Technologies, Inc., to Strong River Investments, Inc., dated as of September 21, 2000. (Filed as Exhibit 4.6 to Form 8-K, as filed with the Securities and

	Exchange Commission on November 13, 2000, and incorporated herein by reference.)
10.18+	Warrant issued by NeoGene Technologies, Inc., to Brighton Capital, Ltd., dated as of September 21, 2000.
10.19	Master Lease Agreement dated as of September 22, 2000, by and between the Registrant and Comdisco Laboratory and Scientific Group. (Filed as Exhibit 10.16 to the Annual Report on Form 10-K, as amended, as filed with the Securities and Exchange Commission on April 25, 2001, and incorporated herein by reference.)
10.20	Amendment No. 1 to Master Lease Agreement dated as of September 22, 2000, by and between the Registrant and Comdisco Laboratory and Scientific Group. (Filed as Exhibit 10.17 to the Annual Report on Form 10-K, as amended, as filed with the Securities and Exchange Commission on April 25, 2001, and incorporated herein by reference.)
10.21	Equipment Schedule No. S-01 dated as of September 22, 2000, by and between the Registrant and Comdisco Laboratory and Scientific Group. (Filed as Exhibit 10.18 to the Annual Report on Form 10-K, as amended, as filed with the Securities and Exchange Commission on April 25, 2001, and incorporated herein by reference.)

EXHIBIT NO.	DESCRIPTION
10.22	Addendum to Equipment Schedule No. SG-01 dated as of September 22, 2000, by and between the Registrant and Comdisco Laboratory and Scientific Group. (Filed as Exhibit 10.19 to the Annual Report on Form 10-K, as amended, as filed with the Securities and Exchange Commission on April 25, 2001, and incorporated herein by reference.)
10.23	Securities Purchase Agreement dated as of September 29, 2000, by and among the Registrant, Strong River Investments, Inc. and Montrose Investments Ltd. (Filed as Exhibit 4.11 to Form 8-K, as filed with the Securities and Exchange Commission on November 13, 2000, and incorporated herein by reference.)
10.24	Securities Purchase Agreement dated as of December 18, 2000, by and among the Registrant, NeoGene Technologies, Inc. and Societe Generale. (Filed as Exhibit 4.1 to Form 8-K, as filed with the Securities and Exchange Commission on December 28, 2000, and incorporated herein by reference.)
10.25	Registration Rights Agreement dated as of December 18, 2000, by and between NeoGene Technologies, Inc. and Societe Generale. (Filed as Exhibit 4.3 to Form 8-K, as filed with the Securities and Exchange Commission on December 28, 2000, and incorporated herein by reference.)
10.26	Warrant issued by NeoGene Technologies, Inc., to Societe

	Generale, dated as of December 18, 2000. (Filed as Exhibit 4.5 to Form 8-K, as filed with the Securities and Exchange Commission on December 28, 2000, and incorporated herein by reference.)
10.27	Stock Purchase Agreement dated as of January 31, 2001, by and between the Registrant and Amro International S.A. (Filed as Exhibit 10.1 to Form 8-K, as filed with the Securities and Exchange Commission on February 16, 2001, and incorporated herein by reference.)
10.28	Securities Purchase Agreement dated as of March 8, 2001, by and between the Registrant and IAT ReInsurance Syndicate Ltd. (Filed as Exhibit 10.1 to Form 8-K, as filed with the Securities and Exchange Commission on March 14, 2001, and incorporated herein by reference.)
10.29	Letter Agreement dated as of April 17, 2001, by and between the Registrant, Montrose Investments Ltd., Strong River Investments, Inc. and HBK Master Fund L.P. (Filed as Exhibit 10.20 to the Annual Report on Form 10-K, as amended, as filed with the Securities and Exchange Commission on April 25, 2001, and incorporated herein by reference.)
10.30	Securities Purchase Agreement dated as of April 20, 2001, by and between the Registrant, Montrose Investments Ltd. and Strong River Investments, Inc. (Filed as Exhibit 4.63 to the Annual Report on Form 10-K, as amended, as filed with the Securities and Exchange Commission on April 25, 2001, and incorporated herein by reference.)
10.31*	Employee Stock Purchase Plan. (Filed as Exhibit 4.1 to the Registrant's Registration Statement on Form S-8 (No. 333-54246), and incorporated herein by reference.)
10.32*	Amendment 2001-1 to the Employee Stock Purchase Plan effective as of June 21, 2001. (Filed as Exhibit 10.22 to the Annual Report on Form 10-K, as amended, as filed with the Securities and Exchange Commission on April 25, 2001, and incorporated herein by reference.)
10.33*	Executive Employment Agreement for Alvin J. Glasky, Ph.D., dated as of December 1, 2000. (Filed as Exhibit 10.23 to the Annual Report on Form 10-K, as amended, as filed with the Securities and Exchange Commission on April 25, 2001, and incorporated herein by reference.)

EXHIBIT NO.	DESCRIPTION
10.34*	Executive Employment Agreement for Sam Gulko, dated as of December 1, 2000. (Filed as Exhibit 10.24 to the Annual Report on Form 10-K, as amended, as filed with the Securities and Exchange Commission on April 25, 2001, and incorporated herein by reference.)

10.35*+	Executive Employment Agreement for Rajesh C. Shrotriya, M.D., dated as of December 1, 2000.
10.36	Securities Purchase Agreement dated as of May 17, 2001, by and among the Registrant, Montrose Investments Ltd. and Strong River Investments, Inc. (Filed as Exhibit 10.1 to Form 8-K, as filed with the Securities and Exchange Commission on May 21, 2001, and incorporated herein by reference.)
10.37	Letter Agreement dated as of May 17, 2001, by and among the Registrant, Montrose Investments Ltd. and Strong River Investments, Inc. (Filed as Exhibit 10.2 to Form 8-K, as filed with the Securities and Exchange Commission on May 21, 2001, and incorporated herein by reference.)
10.38	License Agreement dated as of June 29, 2001, by and between the Registrant and NDDO Research Foundation. (Filed as Exhibit 10.4 to Form 10-Q, as filed with the Securities and Exchange Commission on November 14, 2001, and incorporated herein by reference.)
10.39+	Letter Agreement dated as of August 10, 2001, by and between the Registrant and Gruntal & Co., L.L.C.
10.40	Stock Purchase Agreement dated as of August 13, 2001, by and among the Registrant, NeoGene Technologies, Inc., Montrose Investments Ltd. and Strong River Investments, Inc. (Filed as Exhibit 10.1 to Form 8-K, as filed with the Securities and Exchange Commission on August 27, 2001, and incorporated herein by reference.)
10.41	Stock Purchase Agreement dated as of August 14, 2001, by and between the Registrant and Summit Capital Management L.L.C. (Filed as Exhibit 10.1 to Form 8-K, as filed with the Securities and Exchange Commission on August 15, 2001, and incorporated herein by reference.)
10.42	License Agreement dated as of August 28, 2001, by and between the Registrant and Johnson Matthey plc. (Filed as Exhibit 10.5 to Form 10-Q, as filed with the Securities and Exchange Commission on November 14, 2001, and incorporated herein by reference.)
10.43	Stock Purchase and Settlement Agreement and Release dated as of September 19, 2001, by and among the Registrant, NeoGene Technologies, Inc. and Societe Generale. (Filed as Exhibit 10.1 to Form 8-K, as filed with the Securities and Exchange Commission on September 24, 2001, and incorporated herein by reference.)
10.44	License Agreement dated as of October 24, 2001, by and between the Registrant and Bristol-Myers Squibb Company. (Filed as Exhibit 10.6 to Form 10-Q, as filed with the Securities and Exchange Commission on November 14, 2001, and incorporated herein by reference.)
10.45	Letter Agreement dated as of November 19, 2001, by and between the Registrant and Ladenburg Thalmann & Co., Inc. (Filed as Exhibit 1.1 to Form 8-K, as filed with the Securities and Exchange Commission on December 11, 2001, and incorporated herein by reference.)

10.46+	Form of Securities Purchase Agreement, by and between the Registrant and certain investors, dated as of December 10, 2001, for the purchase of an aggregate of 519,480 shares of our common stock.

EXHIBIT NO.	DESCRIPTION
10.47+	Letter Agreement dated as of March 11, 2002, by and between the Registrant and Brighton Capital, Ltd.
10.48+	Form of Securities Purchase Agreement, by and between the Registrant and certain investors, dated as of March 12, 2002 and March 15, 2002, for the purchase of an aggregate of 3,100,000 shares of our common stock.
21+	Subsidiaries of Registrant.
23+	Consent of Arthur Andersen LLP.
99.1+	Letter dated April 1, 2002 from the Registrant to the Commission.

* Indicates a management contract or compensatory plan or arrangement.

+ Filed herewith

(b) Reports on Form 8-K.

1. We filed a Report on Form 8-K on October 24, 2001 to report that on October 19, 2001, we executed amendments to the Sales Agreements dated June 12, 2001 as well as the Advisory Agreement dated April 11, 2001 and amended on June 12, 2001 that we had previously entered into with Cantor Fitzgerald & Co.

2. We filed a Report on Form 8-K on October 30, 2001 and on December 20, 2001 to report press releases issued on October 30, 2001 and December 20, 2001, respectively.

3. We filed a Report on Form 8-K on December 11, 2001 to report that we entered into a letter agreement with Ladenburg Thalmann & Co. pursuant to which Landenburg Thalmann & Co. would act as a non-exclusive placement agent in connection with proposed public offerings of common stock and/or warrants to purchase common stock of NeoTherapeutics pursuant to NeoTherapeutics' existing effective shelf registration

statement on Form S-3, file number 333-53108.

SIGNATURES

In accordance with Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this Annual Report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized.

NEOTHERAPEUTICS, INC.

Date: April 2, 2002 By: /s/ Alvin J. Glasky

Alvin J. Glasky, Ph.D.
Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this Annual Report on Form 10-K has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated:

SIGNATURE	TITLE	DATE
/s/ Alvin J. Glasky Alvin J. Glasky, Ph.D.	Chairman of the Board, Chief Executive Officer and Director (Principal Executive Officer)	April 2, 2002
/s/ Rajesh C. Shrotriya, M.D. Rajesh C. Shrotriya, M.D.	President, Chief Operating Officer and Director	April 2, 2002
/s/ Samuel Gulko Samuel Gulko	Senior Vice President Finance, Chief Financial Officer, Secretary, Treasurer and Director (Principal Accounting and Financial Officer)	April 2, 2002
/s/ Mark J. Glasky Mark J. Glasky	Director	April 2, 2002
/s/ Ann C. Kessler Ann C. Kessler, Ph.D.	Director	April 2, 2002
/s/Armin M. Kessler Armin M. Kessler	Director	April 2, 2002
/s/ Eric L. Nelson Eric L. Nelson, Ph.D.	Director	April 2, 2002

/s/ Carol O'Cleireacain Carol O'Cleireacain, Ph.D.	Director	April 2, 2002
/s/ Paul H. Silverman Paul H. Silverman Ph.D., D.Sc.	Director	April 2, 2002

EXHIBIT NO.	DESCRIPTION
3.1	Certificate of Incorporation of the Registrant, as filed on May 7, 1997. (Filed as Exhibit B to the Definitive Proxy Statement dated May 8, 1997, for the Annual Meeting of Shareholders of NeoTherapeutics Colorado, the predecessor to Registrant, held on June 17, 1997, as filed with the Securities and Exchange Commission on May 9, 1997, and incorporated herein by reference.)
3.1.1+	Certificate of Amendment to the Certificate of Incorporation of the Registrant.
3.1.2	Certificate of Designation of 5% Series A Preferred Stock with Conversion Features. (Filed as Exhibit 4.1 to Form 8-K, as filed with the Securities and Exchange Commission on February 9, 1999, and incorporated herein by reference.)
3.1.3	Certificate of Designation of Rights, Preferences and Privileges of Series B Junior Participating Preferred Stock of the Registrant. (Filed as Exhibit 3.1 to Form 8-A12G, as filed with the Securities and Exchange Commission on December 26, 2000, and incorporated herein by reference.)
3.1.4	Certificate of Designations of the Series C Preferred Stock of the Registrant. (Filed as Exhibit 4.7 to the Registration Statement on Form S-3, as amended (No. 333-64432), as filed with the Securities and Exchange Commission on July 2, 2001, and incorporated herein by reference.)
3.2+	Bylaws of the Registrant, as amended.
4.1+	Form of Warrant issued by the Registrant to Sanford Glasky, dated as of December 15, 1997, to purchase up to 16,631 shares of our common stock.
4.2+	Warrant issued by the Registrant to Leasing Technologies, Inc., dated as of September 9, 1998.
4.3	Registration Rights Agreement dated as of January 29, 1999, by and among the Registrant, Westover Investments L.P. and Montrose Investments Ltd. (Filed as Exhibit 4.3 to Form 8-K, as filed with the Securities and Exchange Commission on February 9, 1999, and incorporated herein by reference.)

4.4	Form of Warrant issued by the Registrant to Westover Investments L.P. and Montrose Investments Ltd., dated as of January 29, 1999. (Filed as Exhibit 4.4 to Form 8-K, as filed with the Securities and Exchange Commission on February 9, 1999, and incorporated herein by reference.)
4.5	Warrant issued by the Registrant to Brighton Capital, Ltd., dated as of January 29, 1999. (Filed as Exhibit 4.13 to the Registration Statement on Form S-3 (No. 333-37180), as filed with the Securities and Exchange Commission on May 16, 2000, and incorporated herein by reference.)
4.6+	Form of Warrant issued by the Registrant to certain investors, dated as of May 11, 1999, to purchase up to an aggregate of 80,000 shares of our common stock.
4.7+	Warrant issued by the Registrant to Stradling Yocca Carlson & Rauth, dated as of May 17, 1999.
4.8	Form of Representative's Warrant issued to Joseph Charles & Associates, Inc., dated as of July 26, 1999, to purchase up to 100,000 shares of our common stock. (Filed as Exhibit 4.12 to the Registration Statement on Form S-1, as amended (No. 333-79935), as filed with the Securities and Exchange Commission on July 21, 1999, and incorporated herein by reference.)

EXHIBIT NO.	DESCRIPTION
4.9	Registration Rights Agreement dated as of November 19, 1999, by and among the Registrant, Strong River Investments, Inc. and Montrose Investments Ltd. (Filed as Exhibit 4.1 to Form 8-K, as filed with the Securities and Exchange Commission on December 7, 1999, and incorporated herein by reference.)
4.10	Closing Warrant issued by the Registrant to Montrose Investments Ltd., dated as of November 19, 1999. (Filed as Exhibit 4.1 to Form 8-K, as filed with the Securities and Exchange Commission on December 7, 1999, and incorporated herein by reference.)
4.11	Closing Warrant issued by the Registrant to Strong River Investments, Inc., dated as of November 19, 1999. (Filed as Exhibit 4.1 to Form 8-K, as filed with the Securities and Exchange Commission on December 7, 1999, and incorporated herein by reference.)
4.12	Warrant issued by the Registrant to Brighton Capital, Ltd., dated as of November 19, 1999. (Filed as Exhibit 4.14 to the Registration Statement on Form S-3 (No. 333-37180), as filed with the Securities and Exchange Commission on May 16, 2000, and incorporated herein by reference.)
4.13	Registration Rights Agreement dated as of February 25, 2000, by and among the Registrant, Montrose Investments Ltd. and Strong River Investments, Inc. (Filed as Exhibit 4.2 to Form

	8-K, as filed with the Securities and Exchange Commission on April 3, 2000, and incorporated herein by reference.)
4.14	Closing Warrant issued by the Registrant to Montrose Investments Ltd., dated as of February 25, 2000. (Filed as Exhibit 4.3 to Form 8-K, as filed with the Securities and Exchange Commission on April 3, 2000, and incorporated herein by reference.)
4.15	Closing Warrant issued by the Registrant to Strong River Investments, Inc., dated as of February 25, 2000. (Filed as Exhibit 4.4 to Form 8-K, as filed with the Securities and Exchange Commission on April 3, 2000, and incorporated herein by reference.)
4.16	Warrant issued by the Registrant to Brighton Capital, Ltd., dated as of February 25, 2000. (Filed as Exhibit 4.15 to the Registration Statement on Form S-3 (No. 333-37180), as filed with the Securities and Exchange Commission on May 16, 2000, and incorporated herein by reference.)
4.17	Registration Rights Agreement dated as of April 6, 2000, by and among the Registrant, Strong River Investments, Inc. and Montrose Investments Ltd. (Filed as Exhibit 4.2 to Form 8-K, as filed with the Securities and Exchange Commission on April 21, 2000, and incorporated herein by reference.)
4.18	Class A Warrant issued by the Registrant to Montrose Investments Ltd., dated as of April 6, 2000. (Filed as Exhibit 4.4 to Form 8-K, as filed with the Securities and Exchange Commission on April 21, 2000, and incorporated herein by reference.)
4.19	Class A Warrant issued by the Registrant to Strong River Investments, Inc., dated as of April 6, 2000. (Filed as Exhibit 4.5 to Form 8-K, as filed with the Securities and Exchange Commission on April 21, 2000, and incorporated herein by reference.)
4.20	Class B Warrant issued by the Registrant to Montrose Investments Ltd., dated as of April 6, 2000. (Filed as Exhibit 4.6 to Form 8-K, as filed with the Securities and Exchange Commission on April 21, 2000, and incorporated herein by reference.)

EXHIBIT NO.	DESCRIPTION
4.21	Class B Warrant issued by the Registrant to Strong River Investments, Inc., dated as of April 6, 2000. (Filed as Exhibit 4.7 to Form 8-K, as filed with the Securities and Exchange Commission on April 21, 2000, and incorporated herein by reference.)
4.22	Warrant issued by the Registrant to Brighton Capital, Ltd., dated as of April 6, 2000. (Filed as Exhibit 4.16 to the Registration Statement on Form S-3 (No. 333-37180), as filed with the Securities and Exchange Commission on May 16, 2000,

and incorporated herein by reference.)

4.23	Registration Rights Agreement dated as of April 28, 2000, by and among the Registrant, Royal Canadian Growth Fund and Dlouhy Investments Inc. (Filed as Exhibit 4.2 to Form 8-K, as filed with the Securities and Exchange Commission on May 25, 2000, and incorporated herein by reference.)
4.24	Warrant issued by the Registrant to Royal Canadian Growth Fund, dated as of May 1, 2000. (Filed as Exhibit 4.3 to Form 8-K, as filed with the Securities and Exchange Commission on May 25, 2000, and incorporated herein by reference.)
4.25	Warrant issued by the Registrant to Dlouhy Investments Inc., dated as of May 1, 2000. (Filed as Exhibit 4.4 to Form 8-K, as filed with the Securities and Exchange Commission on May 25, 2000, and incorporated herein by reference.)
4.26	Registration Rights Agreement dated as of September 21, 2000, by and among the Registrant, Strong River Investments, Inc. and Montrose Investments Ltd. (Filed as Exhibit 4.4 to Form 8-K, as filed with the Securities and Exchange Commission on November 13, 2000, and incorporated herein by reference.)
4.27	Warrant issued by the Registrant to Montrose Investments Ltd., dated as of September 21, 2000. (Filed as Exhibit 4.7 to Form 8-K, as filed with the Securities and Exchange Commission on November 13, 2000, and incorporated herein by reference.)
4.28	Warrant issued by the Registrant to Strong River Investments, Inc., dated as of September 21, 2000. (Filed as Exhibit 4.8 to Form 8-K, as filed with the Securities and Exchange Commission on November 13, 2000, and incorporated herein by reference.)
4.29	Registration Rights Agreement dated as of September 29, 2000, by and among the Registrant, Strong River Investments, Inc. and Montrose Investments Ltd. (Filed as Exhibit 4.12 to Form 8-K, as filed with the Securities and Exchange Commission on November 13, 2000, and incorporated herein by reference.)
4.30	Closing Warrant issued by the Registrant to Montrose Investments, Ltd., dated as of September 29, 2000. (Filed as Exhibit 4.13 to Form 8-K, as filed with the Securities and Exchange Commission on November 13, 2000, and incorporated herein by reference.)
4.31	Closing Warrant issued by the Registrant to Strong River Investments, Inc., dated as of September 29, 2000. (Filed as Exhibit 4.14 to Form 8-K, as filed with the Securities and Exchange Commission on November 13, 2000, and incorporated herein by reference.)
4.32+	Form of Warrants issued by the Registrant to Brighton Capital, Ltd., dated between September 18, 2000 and May 18, 2001, to purchase up to an aggregate of 130,473 shares of our common stock.

EXHIBIT NO.	DESCRIPTION

4.33	Rights Agreement, dated as of December 13, 2000, between the Registrant and U.S. Stock Transfer Corporation, as Rights Agent, which includes as Exhibit A thereto the form of Certificate of Designation for the Series B Junior Participating Preferred Stock, as Exhibit B thereto the Form of Rights Certificate and as Exhibit C thereto a Summary of Terms of Stockholder Rights Plan. (Filed as Exhibit 4.1 to Form 8-A12G, as filed with the Securities and Exchange Commission on December 26, 2000, and incorporated herein by reference.)
4.34	Registration Rights Agreement dated as of December 18, 2000, by and between the Registrant and Societe Generale. (Filed as Exhibit 4.4 to Form 8-K, as filed with the Securities and Exchange Commission on December 28, 2000, and incorporated herein by reference.)
4.35	Warrant issued by the Registrant to Societe Generale, dated as of December 18, 2000. (Filed as Exhibit 4.6 to Form 8-K, as filed with the Securities and Exchange Commission on December 28, 2000, and incorporated herein by reference.)
4.36+	Warrant issued by the Registrant to Brighton Capital, Ltd., dated as of December 18, 2000.
4.37+	Warrant issued by the Registrant to CroMedica Global, Inc., dated as of January 25, 2001.
4.38	Warrant issued by the Registrant to IAT ReInsurance Syndicate Ltd., dated as of March 8, 2001. (Filed as Exhibit 10.2 to Form 8-K, as filed with the Securities and Exchange Commission on March 14, 2001, and incorporated herein by reference.)
4.39	Advisory Agreement dated as of April 11, 2001, by and between the Registrant and Cantor Fitzgerald & Co. (Filed as Exhibit 4.1 to the Registration Statement on Form S-3, as amended (No. 333-64444), as filed with the Securities and Exchange Commission on July 2, 2001, and incorporated herein by reference.)
4.40	Amendment to the Advisory Agreement dated as of June 12, 2001, by and between the Registrant and Cantor Fitzgerald & Co. (Filed as Exhibit 4.2 to the Registration Statement on Form S-3, as amended (No. 333-64444), as filed with the Securities and Exchange Commission on July 2, 2001, and incorporated herein by reference.)
4.41	Amendment to the Advisory Agreement, dated as of October 19, 2001, by and between the Registrant and Cantor Fitzgerald & Co. (Filed as Exhibit 4.1 to Form 8-K, as filed with the Securities and Exchange Commission on October 24, 2001, and incorporated herein by reference.)
4.42	Warrant issued by the Registrant to Montrose Investments Ltd., dated as of May 18, 2001. (Filed as Exhibit 4.1 to Form 8-K, as filed with the Securities and Exchange Commission on May 21, 2001, and incorporated herein by reference.)
4.43	Warrant issued by the Registrant to Strong River Investments, Inc., dated as of May 18, 2001. (Filed as Exhibit 4.2 to Form

	8-K, as filed with the Securities and Exchange Commission on May 21, 2001, and incorporated herein by reference.)
4.44+	Form of Warrant issued by the Registrant to Gruntal & Co., L.L.C., dated as of August 10, 2001, to purchase up to 125,000 shares of our common stock.

EXHIBIT NO.	DESCRIPTION
4.45	Form of Warrants issued by the Registrant to Cantor Fitzgerald & Co, dated as of December 6, 2001 and December 13, 2001, to purchase up to an aggregate of 132,139 shares of our common stock. (Filed as Exhibit A to Schedule 1 to Exhibit 1.1 to Form 8-K, as filed with the Securities and Exchange Commission on October 24, 2001, and incorporated herein by reference.)
4.46+	Warrant issued by the Registrant to Jefferies & Company, Inc., dated as of December 13, 2001.
4.47+	Form of Warrant issued by the Registrant to certain purchasers, dated as of March 13, 2002 and March 15, 2002, to purchase up to an aggregate of 795,000 shares of our common stock.
10.1*	1991 Stock Incentive Plan. (Filed as Exhibit 10.2 to the Registration Statement on Form SB-2, as amended (No. 333-05342-LA), and incorporated herein by reference.)
10.2*	Note dated as of June 21, 1996, between the Registrant and Alvin J. Glasky and related Security Agreement dated August 31, 1990. (Filed as Exhibit 10.4 to the Registration Statement on Form SB-2, as amended (No. 333-05342-LA), and incorporated herein by reference.)
10.3*	Addendum to Note dated as of June 21, 1996, between the Registrant and Alvin J. Glasky. (Filed as Exhibit 10.12 to the Form 10-KSB for fiscal year ended December 31, 1996, as filed with the Securities and Exchange Commission on March 31, 1997, and incorporated herein by reference.)
10.4*	Agreement dated as of June 6, 1991, as amended on July 26, 1996, by and between the Registrant and Alvin J. Glasky. (Filed as Exhibit 10.7 to the Registration Statement on Form SB-2, as amended (No. 333-05342-LA), and incorporated herein by reference.)
10.5*	Agreement dated as of June 30, 1991, as amended on July 26, 1996, by and between the Registrant and Alvin J. Glasky. (Filed as Exhibit 10.8 to the Registration Statement on Form SB-2, as amended (No. 333-05342-LA), and incorporated herein by reference.)
10.6*	Form of Indemnification Agreement between the Registrant and each of its officers and directors. (Filed as Exhibit 10.10 to the Registration Statement on Form SB-2, as amended (No. 333-05342-LA), and incorporated herein by reference.)
10.7	Industrial Lease Agreement dated as of January 16, 1997,

	between the Registrant and the Irvine Company. (Filed as Exhibit 10.11 to the Form 10-KSB for the fiscal year ended December 31, 1996, as filed with the Securities and Exchange Commission on March 31, 1997, and incorporated herein by reference.)
10.8*+	Amended and Restated 1997 Stock Incentive Plan.
10.9	Master Note and Security Agreement between the Registrant and Leasing Technologies, Inc. dated as of July 10, 1998. (Filed as Exhibit 4 to Form 10-QSB for the quarter ended September 30, 1998, as filed with the Securities and Exchange Commission on November 9, 1998, and incorporated herein by reference.)
10.10	Securities Purchase Agreement dated as of February 25, 2000, by and among the Registrant, Montrose Investments Ltd. and Strong River Investments, Inc. (Filed as Exhibit 4.1 to Form 8-K, as filed with the Securities and Exchange Commission on April 3, 2000, and incorporated herein by reference.)

EXHIBIT NO.	DESCRIPTION
10.11	Convertible Debenture Purchase Agreement dated as of April 6, 2000, by and among the Registrant, Strong River Investments, Inc. and Montrose Investments Ltd. (Filed as Exhibit 4.1 to Form 8-K, as filed with the Securities and Exchange Commission on April 21, 2000, and incorporated herein by reference.)
10.12	Securities Purchase Agreement dated as of April 28, 2000, by and between the Registrant and Royal Canadian Growth Fund. (Filed as Exhibit 4.1 to Form 8-K, as filed with the Securities and Exchange Commission on May 25, 2000, and incorporated herein by reference.)
10.13	Letter Agreement dated as of May 1, 2000, by and between the Registrant and Royal Canadian Growth Fund. (Filed as Exhibit 4.5 to Form 8-K, as filed with the Securities and Exchange Commission on May 25, 2000, and incorporated herein by reference.)
10.14	Securities Purchase Agreement dated as of September 21, 2000, by and among the Registrant, Strong River Investments, Inc. and Montrose Investments Ltd. (Filed as Exhibit 4.1 to Form 8-K, as filed with the Securities and Exchange Commission on November 13, 2000, and incorporated herein by reference.)
10.15	Registration Rights Agreement dated as of September 21, 2000, by and among NeoGene Technologies, Inc., Strong River Investments, Inc. and Montrose Investments Ltd. (Filed as Exhibit 4.3 to Form 8-K, as filed with the Securities and Exchange Commission on November 13, 2000, and incorporated herein by reference.)
10.16	Warrant issued by NeoGene Technologies, Inc., to Montrose Investments Ltd., dated as of September 21, 2000. (Filed as Exhibit 4.5 to Form 8-K, as filed with the Securities and

	Exchange Commission on November 13, 2000, and incorporated herein by reference.)
10.17	Warrant issued by NeoGene Technologies, Inc., to Strong River Investments, Inc., dated as of September 21, 2000. (Filed as Exhibit 4.6 to Form 8-K, as filed with the Securities and Exchange Commission on November 13, 2000, and incorporated herein by reference.)
10.18+	Warrant issued by NeoGene Technologies, Inc., to Brighton Capital, Ltd., dated as of September 21, 2000.
10.19	Master Lease Agreement dated as of September 22, 2000, by and between the Registrant and Comdisco Laboratory and Scientific Group. (Filed as Exhibit 10.16 to the Annual Report on Form 10-K, as amended, as filed with the Securities and Exchange Commission on April 25, 2001, and incorporated herein by reference.)
10.20	Amendment No. 1 to Master Lease Agreement dated as of September 22, 2000, by and between the Registrant and Comdisco Laboratory and Scientific Group. (Filed as Exhibit 10.17 to the Annual Report on Form 10-K, as amended, as filed with the Securities and Exchange Commission on April 25, 2001, and incorporated herein by reference.)
10.21	Equipment Schedule No. S-01 dated as of September 22, 2000, by and between the Registrant and Comdisco Laboratory and Scientific Group. (Filed as Exhibit 10.18 to the Annual Report on Form 10-K, as amended, as filed with the Securities and Exchange Commission on April 25, 2001, and incorporated herein by reference.)

EXHIBIT NO.	DESCRIPTION
10.22	Addendum to Equipment Schedule No. SG-01 dated as of September 22, 2000, by and between the Registrant and Comdisco Laboratory and Scientific Group. (Filed as Exhibit 10.19 to the Annual Report on Form 10-K, as amended, as filed with the Securities and Exchange Commission on April 25, 2001, and incorporated herein by reference.)
10.23	Securities Purchase Agreement dated as of September 29, 2000, by and among the Registrant, Strong River Investments, Inc. and Montrose Investments Ltd. (Filed as Exhibit 4.11 to Form 8-K, as filed with the Securities and Exchange Commission on November 13, 2000, and incorporated herein by reference.)
10.24	Securities Purchase Agreement dated as of December 18, 2000, by and among the Registrant, NeoGene Technologies, Inc. and Societe Generale. (Filed as Exhibit 4.1 to Form 8-K, as filed with the Securities and Exchange Commission on December 28, 2000, and incorporated herein by reference.)
10.25	Registration Rights Agreement dated as of December 18, 2000, by and between NeoGene Technologies, Inc. and Societe Generale. (Filed as Exhibit 4.3 to Form 8-K, as filed with the Securities and Exchange Commission on December 28, 2000, and

	incorporated herein by reference.)
10.26	Warrant issued by NeoGene Technologies, Inc., to Societe Generale, dated as of December 18, 2000. (Filed as Exhibit 4.5 to Form 8-K, as filed with the Securities and Exchange Commission on December 28, 2000, and incorporated herein by reference.)
10.27	Stock Purchase Agreement dated as of January 31, 2001, by and between the Registrant and Amro International S.A. (Filed as Exhibit 10.1 to Form 8-K, as filed with the Securities and Exchange Commission on February 16, 2001, and incorporated herein by reference.)
10.28	Securities Purchase Agreement dated as of March 8, 2001, by and between the Registrant and IAT ReInsurance Syndicate Ltd. (Filed as Exhibit 10.1 to Form 8-K, as filed with the Securities and Exchange Commission on March 14, 2001, and incorporated herein by reference.)
10.29	Letter Agreement dated as of April 17, 2001, by and between the Registrant, Montrose Investments Ltd., Strong River Investments, Inc. and HBK Master Fund L.P. (Filed as Exhibit 10.20 to the Annual Report on Form 10-K, as amended, as filed with the Securities and Exchange Commission on April 25, 2001, and incorporated herein by reference.)
10.30	Securities Purchase Agreement dated as of April 20, 2001, by and between the Registrant, Montrose Investments Ltd. and Strong River Investments, Inc. (Filed as Exhibit 4.63 to the Annual Report on Form 10-K, as amended, as filed with the Securities and Exchange Commission on April 25, 2001, and incorporated herein by reference.)
10.31*	Employee Stock Purchase Plan. (Filed as Exhibit 4.1 to the Registrant's Registration Statement on Form S-8 (No. 333-54246), and incorporated herein by reference.)
10.32*	Amendment 2001-1 to the Employee Stock Purchase Plan effective as of June 21, 2001. (Filed as Exhibit 10.22 to the Annual Report on Form 10-K, as amended, as filed with the Securities and Exchange Commission on April 25, 2001, and incorporated herein by reference.)
10.33*	Executive Employment Agreement for Alvin J. Glasky, Ph.D., dated as of December 1, 2000. (Filed as Exhibit 10.23 to the Annual Report on Form 10-K, as amended, as filed with the Securities and Exchange Commission on April 25, 2001, and incorporated herein by reference.)

EXHIBIT NO.	DESCRIPTION
10.34*	Executive Employment Agreement for Sam Gulko, dated as of December 1, 2000. (Filed as Exhibit 10.24 to the Annual Report on Form 10-K, as amended, as filed with the Securities and Exchange Commission on April 25, 2001, and incorporated herein by reference.)

10.35*+	Executive Employment Agreement for Rajesh C. Shrotriya, M.D., dated as of December 1, 2000.
10.36	Securities Purchase Agreement dated as of May 17, 2001, by and among the Registrant, Montrose Investments Ltd. and Strong River Investments, Inc. (Filed as Exhibit 10.1 to Form 8-K, as filed with the Securities and Exchange Commission on May 21, 2001, and incorporated herein by reference.)
10.37	Letter Agreement dated as of May 17, 2001, by and among the Registrant, Montrose Investments Ltd. and Strong River Investments, Inc. (Filed as Exhibit 10.2 to Form 8-K, as filed with the Securities and Exchange Commission on May 21, 2001, and incorporated herein by reference.)
10.38	License Agreement dated as of June 29, 2001, by and between the Registrant and NDDO Research Foundation. (Filed as Exhibit 10.4 to Form 10-Q, as filed with the Securities and Exchange Commission on November 14, 2001, and incorporated herein by reference.)
10.39+	Letter Agreement dated as of August 10, 2001, by and between the Registrant and Gruntal & Co., L.L.C.
10.40	Stock Purchase Agreement dated as of August 13, 2001, by and among the Registrant, NeoGene Technologies, Inc., Montrose Investments Ltd. and Strong River Investments, Inc. (Filed as Exhibit 10.1 to Form 8-K, as filed with the Securities and Exchange Commission on August 27, 2001, and incorporated herein by reference.)
10.41	Stock Purchase Agreement dated as of August 14, 2001, by and between the Registrant and Summit Capital Management L.L.C. (Filed as Exhibit 10.1 to Form 8-K, as filed with the Securities and Exchange Commission on August 15, 2001, and incorporated herein by reference.)
10.42	License Agreement dated as of August 28, 2001, by and between the Registrant and Johnson Matthey plc. (Filed as Exhibit 10.5 to Form 10-Q, as filed with the Securities and Exchange Commission on November 14, 2001, and incorporated herein by reference.)
10.43	Stock Purchase and Settlement Agreement and Release dated as of September 19, 2001, by and among the Registrant, NeoGene Technologies, Inc. and Societe Generale. (Filed as Exhibit 10.1 to Form 8-K, as filed with the Securities and Exchange Commission on September 24, 2001, and incorporated herein by reference.)
10.44	License Agreement dated as of October 24, 2001, by and between the Registrant and Bristol-Myers Squibb Company. (Filed as Exhibit 10.6 to Form 10-Q, as filed with the Securities and Exchange Commission on November 14, 2001, and incorporated herein by reference.)
10.45	Letter Agreement dated as of November 19, 2001, by and between the Registrant and Ladenburg Thalmann & Co., Inc. (Filed as Exhibit 1.1 to Form 8-K, as filed with the Securities and Exchange Commission on December 11, 2001, and incorporated herein by reference.)

10.46+	Form of Securities Purchase Agreement, by and between the Registrant and certain investors, dated as of December 10, 2001, for the purchase of an aggregate of 519,480 shares of our common stock.

EXHIBIT NO.	DESCRIPTION
10.47+	Letter Agreement dated as of March 11, 2002, by and between the Registrant and Brighton Capital, Ltd.
10.48+	Form of Securities Purchase Agreement, by and between the Registrant and certain investors, dated as of March 12, 2002 and March 15, 2002, for the purchase of an aggregate of 3,100,000 shares of our common stock.
21+	Subsidiaries of Registrant.
23+	Consent of Arthur Andersen LLP.
99.1+	Letter dated April 1, 2002 from the Registrant to the Commission.

* Indicates a management contract or compensatory plan or arrangement.

+ Filed herewith