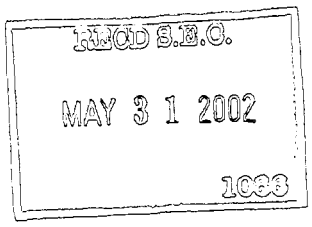
NEOSE

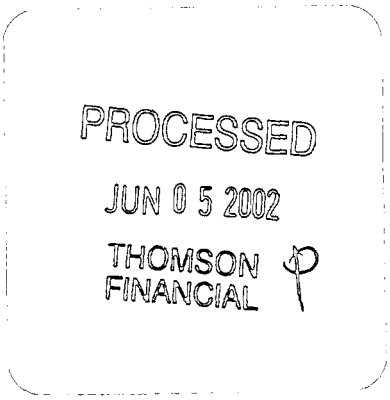
AR/S



P.E.
12-31-01

{ Neose Technologies, Inc. 2001 Annual Report }

The big picture



2001

Overview

In 2001, Neose laid the foundation for its transformation from a development-stage company to a commercial enterprise. The company signed a licensing agreement with Wyeth Pharmaceuticals, a division of Wyeth, increased its commitment to applied research and development, initiated an expansion of its manufacturing facilities, and more than doubled its business and commercial development team — all in preparation for the first wave of growth for GlycoAdvance™, an exciting application of Neose's innovative glycosylation technology.

While scientists at Neose have been simplifying the synthesis of complex carbohydrates (sugars) and helping to understand the integral role they play in biological systems, drug companies worldwide are awakening to the importance of sugar structures on glycoproteins and monoclonal antibodies. Neose is a leader in carbohydrate synthesis and has proprietary technology to control protein glycosylation — one of the most limiting problems in protein drug development.

With its proprietary technology and intellectual capital, Neose believes it can accelerate protein drug development, manufacturing, and commercialization, creating greater competitive advantage for itself and for its partners.

2001: LAYING THE

FOUNDATION

$80 billion

{ Opportunity }

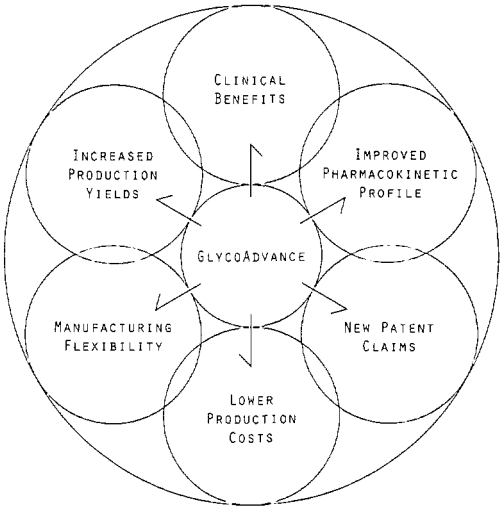
WORLDWIDE SALES OF GLYCOPROTEIN AND ANTIBODY DRUGS WERE ABOUT $17.5 BILLION IN 2000. BY 2010, WORLDWIDE SALES MAY EXCEED

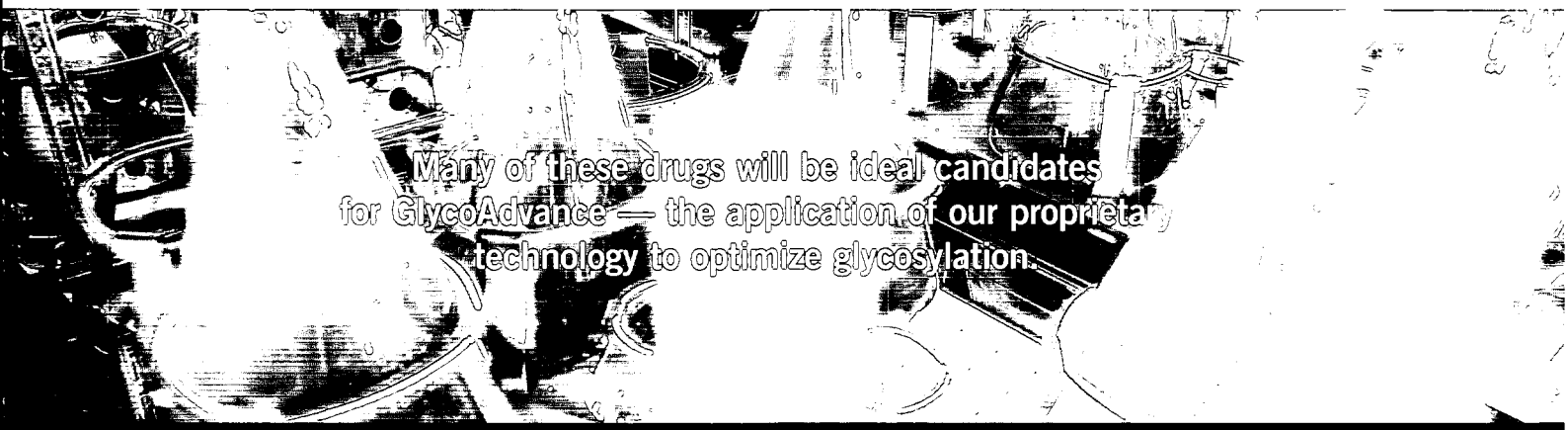
$80 BILLION*

In the U.S., the market for biological drugs is the most rapidly growing segment of the pharmaceutical industry. According to the Pharmaceutical Research and Manufacturers of America (PhRMA), more than 360 biotechnology drugs are in development for more than 200 diseases. Many of them are glycoproteins — proteins with attached carbohydrate chains.

The pattern of these carbohydrates on glycoproteins — glycosylation — is extremely important, and incomplete glycosylation can cause a host of problems, such as short half-lives, higher dosing for patients, lower manufacturing yields, and higher production costs. In fact, some manufacturers discard 80% of their proteins because the attached sugars are incorrect.** Many protein drugs on the market or in development could be improved by GlycoAdvance. It's also possible that some promising recombinant proteins have been shelved because of glycosylation problems. Proper glycosylation is critical to the successful development, production, and efficacy of these compounds.

*Medical & Healthcare Marketplace Guide, 16th ed., Dorland's Biomedical, 2000-2001; Monoclonal Antibodies, UBS Warburg, May 2001; Health Advances analysis **Science, 23 March 2001





DRIVING COMPETITIVE ADVANTAGE Neose's GlycoAdvance uses naturally occurring enzymes — glycosyltransferases — to add sugars to proteins that have been secreted from protein expression systems, primarily Chinese hamster ovary (CHO) cells. GlycoAdvance actually controls glycosylation, adding as much, or little, as needed. GlycoAdvance services and products can be used to develop proteins with superior properties. By controlling the glycosylation of a protein, Neose can enhance effectiveness and half-life.

→ This flexibility means that Neose's technology may be applied to a range of expression systems, such as transgenic animals and plants, insect cells, and fungi, such as yeast, that may be more efficient than CHO cells. Unlocking the potential of these alternate systems depends on proper glycosylation, and Neose holds the key.

→ Neose has completed feasibility studies on development stage and marketed protein therapeutics for biotechnology and pharmaceutical companies, and all of them demonstrate that GlycoAdvance successfully adds missing sugars and improves drug properties, such as half-life and activity. At the June 2001 Biotechnology Industry Organization meeting in San Diego, scientists from Biogen and Eli Lilly reported that GlycoAdvance significantly increased protein half-life.

→ The opportunities for GlycoAdvance are exciting, but for Neose, the story doesn't end here.

$34,000,000

{ The Sleeping Giant }

THE NIH IS PROVIDING

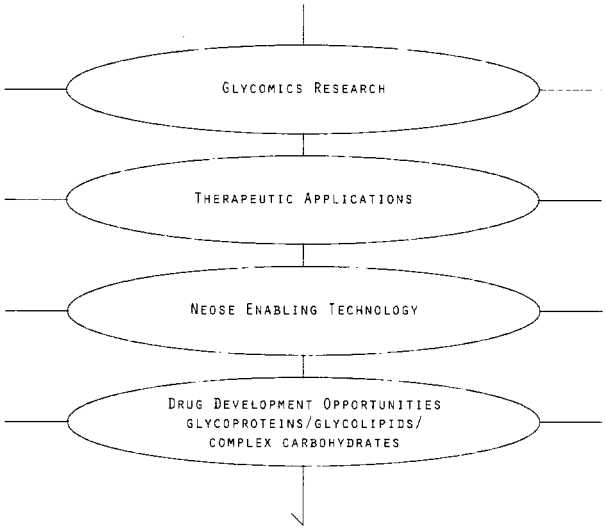
$34,000,000

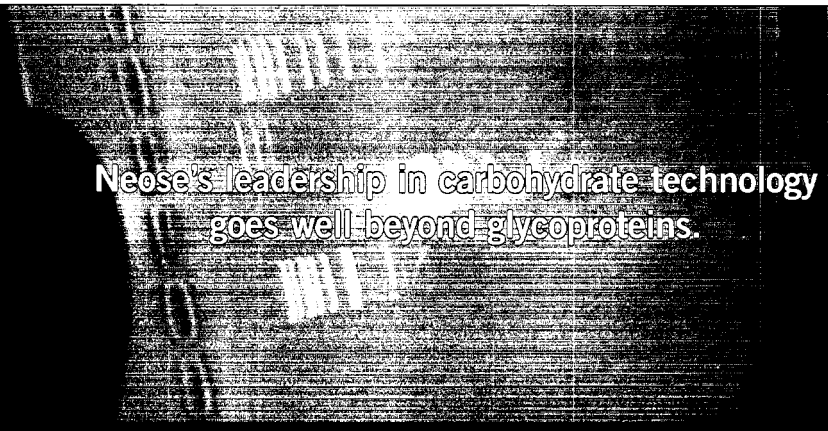
IN RESEARCH GRANTS TO SUPPORT GLYCOMICS RESEARCH.

Glycobiology, the study of the biological function of complex carbohydrates, has been referred to as "the sleeping giant" of the biotechnology industry.* It is an area that has been largely overlooked by many biotechnology and pharmaceutical companies, mostly because of the challenges associated with developing and producing carbohydrate-based drugs. The field, however, is gaining momentum. In 2001, the National Institutes of Health awarded the first of $34 million in grants to encourage research in the field of "glycomics," the study of the role cell surface carbohydrates play in cellular communication and interaction.

Neose is developing a broad range of applications for carbohydrate synthesis technology, and is well positioned to take advantage of new discoveries in glycobiology. With its superior technology platform and broad business base, Neose is positioned to take advantage of carbohydrate-based opportunities coming from glycomics research.

*Science, 23 March 2001





Neose's leadership in carbohydrate technology goes well beyond glycoproteins.

A BROAD ENABLING TECHNOLOGY

Along with GlycoAdvance, Neose applies its carbohydrate synthesis technology in two additional areas:

- Neose's GlycoTherapeutics programs produce carbohydrate-based molecules that previously could not be made efficiently for commercial use. Glycolipids and complex carbohydrates serve as active ingredients in compounds currently being tested against devastating conditions like cancer, Parkinson's disease, and autoimmune disorders.
- Neose's GlycoActives programs develop carbohydrate ingredients for food and nutritional applications. Neose can produce carbohydrate ingredients that may improve a range of products from infant formula to animal feed.

By harnessing the power of enzymes, Neose can enable its corporate partners to fight diseases in innovative ways, enhance food quality, and provide consumers with important benefits.

In 2001, Neose entered into a research, development, and license agreement with Wyeth Pharmaceuticals, a division of Wyeth, for the use of GlycoAdvance to develop an improved production system for Wyeth's rPSGL-Ig (P-selectin glycoprotein ligand). Currently in Phase II clinical trials, the compound is being developed to treat inflammation and thrombosis associated with acute coronary syndrome and reperfusion injury. Wyeth is evaluating the use of GlycoAdvance services and products in the production of rPSGL-Ig for Phase III clinical trials and commercial launch.

The agreement with Wyeth strengthens Neose's financial position and sets the stage for additional collaborations with leading pharmaceutical and biotechnology partners.

{ Partnerships }

GLYCOADVANCE MAY PLAY A KEY ROLE IN THE DEVELOPMENT OF

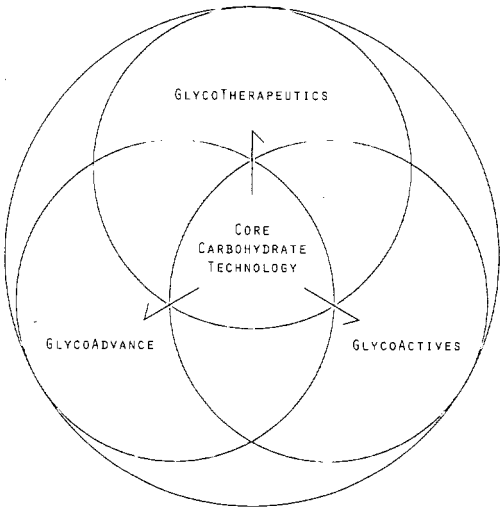
WYETH'S

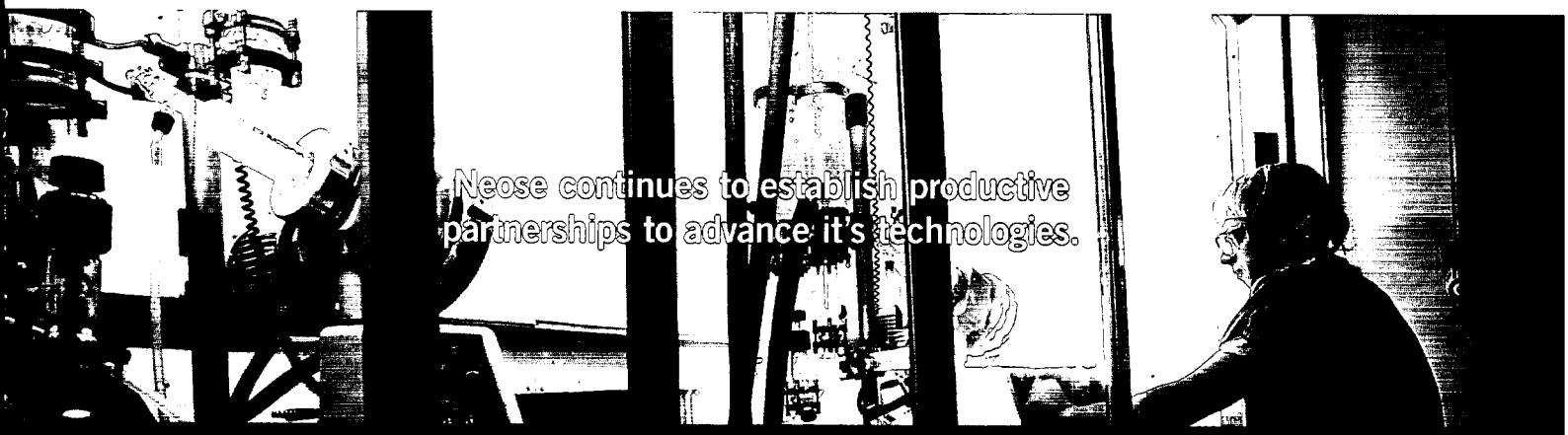
RPSGL-IG — A COMPOUND IN CLINICAL TRIALS FOR MYOCARDIAL INFARCTION.

UPDATE

Subsequent to the printing of our annual report, we were informed that Wyeth Pharmaceuticals did not intend to continue development of rPSGL-Ig for the treatment of myocardial infarction. We learned of Wyeth's decision on May 9, 2002, and made an announcement disclosing this information the same day. Neose's GlycoAdvance™ technology played no part in Wyeth's decision. GlycoAdvance was not intended to be used and was not used in the production of compound used in the Phase II trials.

rPSGL-Ig





A PRODUCTIVE PARTNER

Collaborations and partnerships are an important part of Neose's business. Neose is working with major pharmaceutical companies, promising development-stage companies, and highly-respected academic institutions.

In its GlycoTherapeutics business, Neose played a key role in the success of Novazyme Pharmaceuticals, which has a drug development program for lysosomal storage diseases, such as Pompe, Hurler, and Fabry. The program caught the attention of Genzyme General, which acquired Novazyme in 2001. As a result, Neose received approximately $6.1 million from the sale of Genzyme stock received in the transaction, and has a significant royalty interest in any lysosomal storage disease product commercialized by Genzyme using the Novazyme technology. Other activities within Neose's GlycoTherapeutics business include:

- a research collaboration with Neuronyx to develop carbohydrate-based drugs for Parkinson's disease and other neurological indications;
- a research collaboration with Harvard University to determine if carbohydrates can be used to treat autoimmune diseases.

In its GlycoActives business, Neose is working with:

- McNeil Nutritionals (a Johnson & Johnson company) in a joint venture to develop a well-tolerated, low-calorie bulking agent for use as a sugar replacement, as well as other carbohydrates that may benefit the food and feed industries; and
- Wyeth Nutrition to develop a process to manufacture a bioactive carbohydrate for pediatric nutritional formulas.

$17 million

{ Execution }

NEOSE HAS

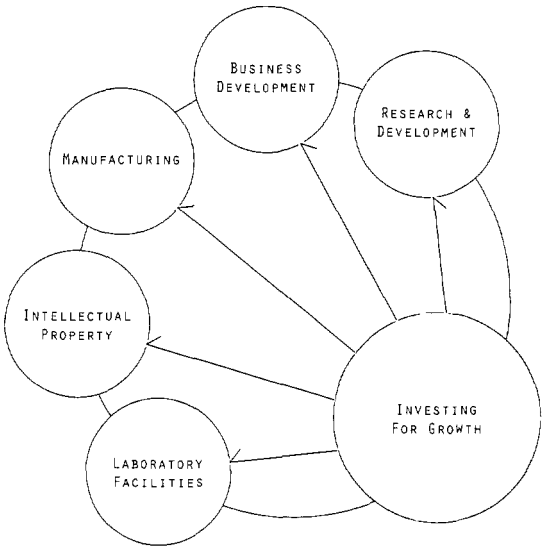
MULTIPLE APPROACHES

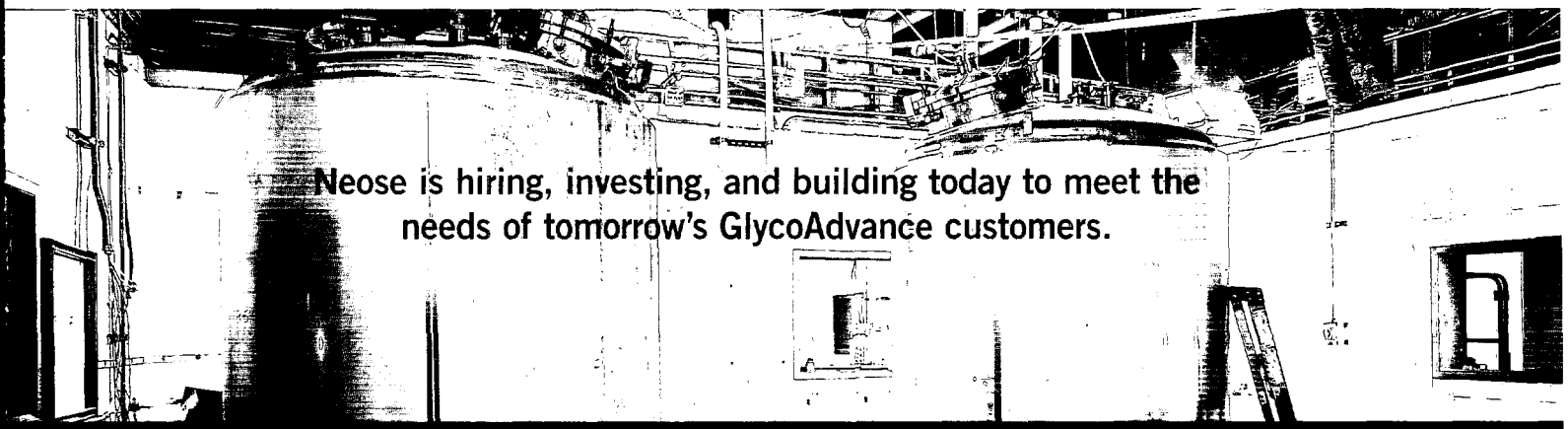
TO COMMERCIALIZING GLYCOADVANCE.

To realize the full potential of GlycoAdvance, Neose is energetically pursuing a variety of partnering opportunities, including:

- product-specific partnerships that will focus on glycoprotein drugs in clinical development, such as the agreement with Wyeth Pharmaceuticals;
- multi-product agreements that will enable companies to benefit from GlycoAdvance services across their product pipelines and in earlier stages of research and development; and
- collaborations around alternate expression systems that will reduce reliance on costly and inefficient mammalian cell culture technology.

For GlycoTherapeutics, Neose's strategy centers on investing in early-stage development of products with high-value potential. And for GlycoActives, Neose plans to leverage its technical expertise to enable the development of large food ingredient markets, while relying on a partner's industrial experience for market access and growth.





Neose is hiring, investing, and building today to meet the needs of tomorrow's GlycoAdvance customers.

INVESTING FOR GROWTH

In 2001, Neose prepared for growth. To accelerate and secure new corporate partnerships, Neose more than doubled its business and commercial development team, bringing on board individuals with extensive pharmaceutical, R&D, and commercial backgrounds. The team launched a campaign to raise awareness of glycosylation issues, and to show how GlycoAdvance services can optimize drug properties, as well as minimize development and scale-up times.

Neose is investing in GlycoAdvance research and development to find new ways to improve protein drugs. This includes establishing the role that glycosylation plays in monoclonal antibody function, developing technology for the site-specific attachment of polyethylene glycol and other molecules to proteins, and enabling improved protein expression systems. Neose is also developing additional GlycoAdvance enzymes and sugar nucleotides to meet customer needs.

Additionally in 2001, Neose recognized the need to expand its facilities to meet the demand for GlycoAdvance products. In July, the company broke ground for a $17 million expansion of its GMP manufacturing facility in Horsham, PA. The new facility is expected to be operational by the end of 2002, producing essential enzymes and sugar nucleotides for Neose's future GlycoAdvance customers.

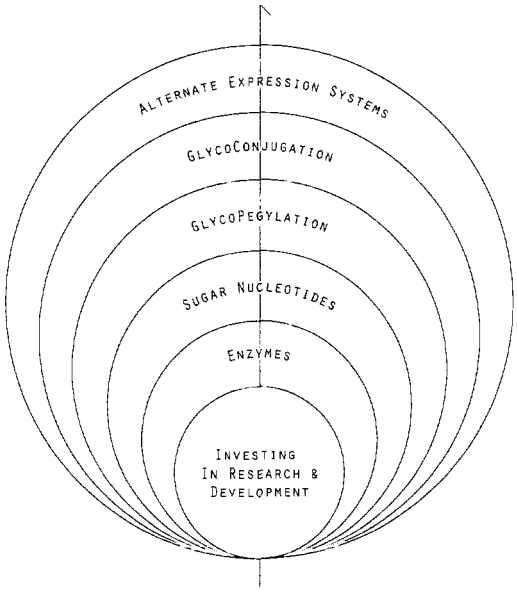
Neose's GlycoAdvance technology provides a competitive advantage in protein drug development and manufacture. GlycoAdvance enables the large-scale, low-cost production of protein drugs with improved efficacy. Neose will use this advantage to acquire, in-license, and co-develop promising drugs, which could include improved versions of drugs whose useful patent protection is expiring. With GlycoAdvance, Neose expects to become an important participant in the multi-billion dollar biologics market.

{ Innovation }

WHERE WILL NEOSE BE IN

FIVE YEARS?

Neose-owned



CREATING VALUE

Neose looks forward to introducing the next generation of GlycoAdvance services and products that will allow Neose to expand and perfect its glycosylation capabilities.

→ What might Neose look like in five years? Here's a snapshot of the possibilities:

- a broad technology portfolio to improve the development and manufacture of glycoprotein drugs;
- multiple GlycoAdvance partnerships;
- expanded manufacturing capacity;
- Neose-owned products in late-stage clinical trials or registration; and
- alternative systems for protein production in use with GlycoAdvance services.

→ In the big picture, Neose will be seen as a leader in the development, production, and commercialization of enhanced glycoprotein therapeutics.

Dear Investors and Friends:

I am pleased to report that our activities in 2001 have laid the groundwork for a very successful 2002.

Early in the year, after only a few feasibility studies, and with less than a year of GlycoAdvance marketing experience, the enormous commercial potential of protein glycosylation was becoming clear. It was also becoming clear that without a source of GMP-grade enzymes and substrates, biologics manufacturers viewed GlycoAdvance as a fascinating concept, not a product. We saw, too, that glycosylating other company's drugs is a good business, but that the full value of GlycoAdvance would be realized when Neose used its technology to make its own biotherapeutics better and more efficiently. And we believed that when GlycoAdvance is applied to proteins made in non-mammalian expression systems, we could profoundly change the way biologics are produced.

We began to implement our business plan for GlycoAdvance. First, we significantly enhanced our business development group by adding people with expertise in biologics development, manufacturing, and commercialization. We greatly expanded our San Diego laboratories, which perform much of the early GlycoAdvance feasibility studies. We initiated the construction in Horsham of a cGMP manufacturing facility which will produce the enzymes and reagents for our customers. And we bolstered our staffing with new hires in protein purification, cGMP production, QA/QC, and carbohydrate analytical chemistry.

While preparing to pursue proprietary and improved biologics, Neose also filed more patent applications in 2001 than in any previous year.

What are the results of these activities? The business development team has completely revised Neose's approach to potential customers for GlycoAdvance. One concrete example of the team's effectiveness was the execution, late in 2001, of our first commercial GlycoAdvance agreement. Neose and Wyeth Pharmaceuticals agreed to begin incorporating our glycosylation methods into the production of Wyeth's anti-inflammatory, anti-thrombotic drug, rPSGL-Ig, currently in Phase 2 clinical trials for heart attack. Pre-commercialization payments to Neose from this agreement could total $17 million if all milestones are met. If the drug is approved, post-commercialization payments would be tied to manufacturing cost savings, and to the amount of drug sold.

NEOSE IS WELL

POSITIONED

TO PARTICIPATE IN THE RAPIDLY GROWING BIOLOGICS MARKET.

Our new manufacturing facility should be operational by the end of 2002. We anticipate agreements with new customers that may be product-specific, like the Wyeth agreement, or more broadly aimed at entire protein drug pipelines. We expect shortly to begin work on at least one, proprietary glycoprotein drug, and we have carefully and systematically examined the menu of non-mammalian expression systems, one of which will become the focus of our research and development efforts.

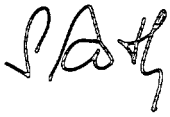
Earlier this month we announced the appointment of C. Boyd Clarke as Neose's new chief executive officer. I am continuing as the chairman of Neose's board of directors and a scientific advisor. My decision to step down as CEO was made in order to attract a candidate who would accelerate the commercialization of our technologies, particularly GlycoAdvance. I am confident we found the right individual in Boyd.

This is one of several changes taking place at the board and officer level at Neose. In June, my long-time colleague, Ed McGuire, will retire from his position as vice president, research and development. Ed was with me when Neose was founded. He has contributed significantly to the transformation of the company from a start-up in a business incubator on the campus of the University of Pennsylvania to a public company on the verge of commercial success.

Two of our directors — Lindsay Rosenwald and Jerry Weisbach — are leaving the board. We are grateful for their years of service to Neose. It was Lindsay who, as a venture capitalist, recognized the commercial potential of enzymatic carbohydrate synthesis, and persuaded me to leave teaching to become a biotech entrepreneur. I took his advice and have never looked back. Jerry has been a member of our board of directors since 1993. Drawing on his years of industry experience, Jerry has provided valuable advice to Neose.

In closing, I believe that Neose has never been stronger. We have a clear strategy for the future. More important, we have a new CEO who will execute this strategy. All of us at Neose look forward to the next stage of our progress.

Sincerely,



STEPHEN A. ROTH
CHAIRMAN
APRIL 5, 2002

{ Transition }

ON APRIL 1, 2002, NEOSE ANNOUNCED THE APPOINTMENT OF

C. BOYD CLARKE

AS PRESIDENT AND CHIEF EXECUTIVE OFFICER.

Dear Shareholders:

I am pleased to have this opportunity to communicate with you at the beginning of my tenure at Neose. I would like to share with you what attracted me to Neose, and my plans for the company in 2002.

What brings me to Neose is the breadth of the company's technology and the tremendous value that could be realized from its application. Neose clearly has the potential to become a leader in the biotechnology industry. The company has been assembling and developing a very strong proprietary technology platform in carbohydrate synthesis. Although the biological importance of carbohydrates is generally well understood, they have long been largely ignored by science and industry because they are hard to make and difficult to analyze. Advances in technology have allowed medical science to better study the critical role that carbohydrates play in biological processes and how they might be used therapeutically. I believe Neose is uniquely positioned to enable the development and commercialization of carbohydrate-based drugs.

While most carbohydrate-based drugs are still in the early stages of development, an application of Neose's technology that is important and immediate is GlycoAdvance, Neose's technology for improving protein drugs. GlycoAdvance has the potential to solve many important biotechnology industry problems — from suboptimal drugs to production inefficiencies. I believe that GlycoAdvance could dramatically effect how protein drugs are developed, manufactured and marketed. This will bring value to our shareholders and our partners. The ultimate beneficiaries will be patients who will benefit from new and better medicines.

I am writing this letter during my first week at Neose. While I have yet to complete a detailed review of Neose's programs, I already know that I have come into a situation where the important assets — technology, intellectual property, staff and infrastructure — are in place and ready to go. My first emphasis will be on refining and executing our business plan to accelerate the commercial use of GlycoAdvance.

In closing, I would like to express my appreciation to Steve Roth and the Neose board of directors for giving me the opportunity to lead Neose during this time of transition and growth.

Sincerely,

C. BOYD CLARKE
PRESIDENT AND CHIEF EXECUTIVE OFFICER
APRIL 5, 2002

Neose

GlycoAdvance	→ Collaborations with biotechnology and pharmaceutical companies	Multiple feasibility studies completed and underway; first commercial agreement signed with Wyeth Pharmaceuticals; expanded business development staff; $17 million manufacturing capacity expansion begun
	→ Development of proprietary Neose protein products	Patent applications filed for novel glycosylation technologies; initiated development of proprietary product strategy
	→ Alternate expression systems	Discussions underway with companies developing alternate expression systems
GlycoTherapeutics	→ Cancer vaccines	Neose and Progenics Pharmaceuticals in discussions concerning future supply of synthetic ganglioside for clinical use
	→ *Parkinson's disease*	*Ongoing research and development* collaboration with Neuronyx, Inc.
	→ Synthetic heparins and glycolipids	Continued development of technology to synthesize heparins and glycolipids
	→ Immune system regulation	Ongoing collaboration with Harvard University
GlycoActives	→ Bulking agents	Joint venture with McNeil Nutritionals to develop bulking agents for food use.
	→ Infant formula ingredient	Continued development with Wyeth Nutrition of a manufacturing process for a bioactive carbohydrate

The following Statements of Operations Data for the years ended December 31, 1997, 1998, 1999, 2000, and 2001, and for the period from inception (January 17, 1989) through December 31, 2001, are derived from our consolidated financial statements that have been audited by Arthur Andersen LLP, independent public accountants. You should read the table below in combination with "Management's Discussion and Analysis of Financial Condition and Results of Operations," and our Consolidated Financial Statements, including the Notes to the Consolidated Financial Statements, included elsewhere in this report.

	Year ended December 31,					Period from inception (January 17, 1989) to December 31,
(in thousands, except per share data)	1997	1998	1999	2000	**2001**	**2001**
Statements of Operations Data:						
Revenue from collaborative agreements	$ 725	$ 390	$ 422	$ 4,600	**$ 1,266**	**$ 12,633**
Operating expenses:						
Research and development	8,013	9,912	10,649	12,094	**14,857**	**78,504**
Marketing, general and administrative	3,884	3,635	4,520	5,648	**9,374**	**36,255**
Total operating expenses	11,897	13,547	15,169	17,742	**24,231**	**114,759**
Gain on sale of marketable security	—	—	—	—	**6,120**	**6,120**
Interest income, net	2,108	1,250	1,429	4,642	**3,516**	**14,365**
Net loss	$ (9,064)	$ (11,907)	$ (13,318)	$ (8,500)	**$ (13,329)**	**$ (81,641)**
Basic and diluted net loss per share	$ (0.96)	$ (1.25)	$ (1.25)	$ (0.63)	**$ (0.95)**	
Basic and diluted weighted-average shares outstanding	9,405	9,556	10,678	13,428	**14,032**	

	As of December 31,				
(in thousands)	1997	1998	1999	2000	**2001**
Balance Sheet Data:					
Cash and marketable securities	$ 43,303	$ 32,023	$ 33,235	$ 94,762	**$ 76,245**
Total assets	58,886	46,265	52,239	114,768	**105,786**
Long-term debt	8,917	8,300	7,300	6,200	**5,100**
Deficit accumulated during the development stage	(34,587)	(46,494)	(59,812)	(68,312)	**(81,641)**
Total stockholders' equity	46,954	36,013	40,785	104,868	**93,946**

Some of the statements in this Annual Report contain forward-looking statements within Section 21E of the Securities Exchange Act of 1934. When used in this Annual Report, the words "anticipate," "believe," "estimate," "may," "expect," "intend," and similar expressions are generally intended to identify forward-looking statements. These forward-looking statements include, among others, the statements about our expectations for increases in operating expenses; expectations for increases in research and development, and marketing, general and administrative expenses in order to develop products, manufacture commercial quantities of products and commercialize our technology; expectations for the development, manufacturing, and approval of new products, including our own proprietary products; expectations for incurring additional capital expenditures to expand our manufacturing capabilities; expectations for generating revenue or becoming profitable on a sustained basis; ability to enter into additional collaboration agreements and the ability of our existing collaboration partners to commercialize products incorporating our technologies; estimate of the sufficiency of our existing cash and cash equivalents and investments to finance our operating and capital requirements; expected losses; and expectations for future capital requirements.

Because we cannot guarantee future results, events, levels of activity, performance, or achievements, our actual results could differ materially from those results expressed in, or implied by, these forward-looking statements. We do not undertake any duty to update after the date of this Annual Report any of the forward-looking statements in this report to conform them to actual results. The following discussions should be read in conjunction with our Consolidated Financial Statements, including the Notes to the Consolidated Financial Statements, included elsewhere in this report.

Overview

Neose develops proprietary technologies for the synthesis and manufacture of complex carbohydrates. Our enzymatic technology platform makes feasible the synthesis and modification of a wide range of complex carbohydrates, which are chains of simple sugar molecules that can be joined together in many different combinations. Our platform enables the production and manipulation of complex carbohydrates either as stand-alone carbohydrate molecules or as carbohydrate structures attached to recombinant therapeutic glycoproteins and glycolipids.

Our GlycoAdvance program uses our technology to complete the human carbohydrate structures on therapeutic glycoproteins. We are also developing our technology to create novel glycosylation patterns, and to link other molecules, such as polyethylene glycol, to glycoproteins. The application of this technology to proteins potentially results in improved clinical activity and pharmacokinetic profile, enhanced drug development flexibility, stronger and additional patent claims, and yield improvements.

Our GlycoTherapeutics program uses our technology to enable the development of carbohydrate-based therapeutics. Our GlycoActives program uses our technology to develop novel carbohydrate food and nutritional ingredients.

As of December 31, 2001, we had an accumulated deficit of approximately $82 million. We expect additional losses for some time as we expand research and development efforts, expand manufacturing scale-up activities, and begin sales and marketing activities.

Critical Accounting Policies

Our significant accounting policies are described in Note 2 to the consolidated financial statements included elsewhere in this report. We believe our most critical accounting policies relate to recognition of revenue and impairment of long-lived assets.

Revenue Recognition

Revenue from collaborative agreements consists of up-front fees, research and development funding, and milestone payments. We recognize revenues from these agreements consistent with Staff Accounting Bulletin No. 101, "Revenue Recognition in Financial Statements", issued by the Securities and Exchange Commission in December 1999. Non-refundable up-front fees are deferred and amortized to revenue over the related performance period. Periodic payments for research and development activities are recognized over the period in which we perform those activities under the terms of each agreement. Revenue resulting from the achievement of milestone events stipulated in the agreements is recognized when the milestone is achieved.

Impairment of Long-Lived Assets

As required by Statement of Financial Accounting Standards No. 121, "Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed of" (SFAS 121), we assess the recoverability of any long-lived assets for which an indicator of impairment exists. Specifically, we calculate, and recognize, any impairment losses by comparing the carrying value of these assets to our estimate of the undiscounted future operating cash flows. Although our current and historical operating and cash flows are indicators of impairment, we believe the future cash flows to be received from our long-lived assets will exceed the assets' carrying value. Accordingly, we have not recognized any impairment losses through December 31, 2001.

In October 2001, the Financial Accounting Standards Board issued Statement of Financial Accounting Standard No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets" (SFAS 144). SFAS 144 replaces SFAS 121 for fiscal years beginning after December 15, 2001. We do not believe SFAS 144 will have a material impact on our consolidated financial position or results of operations.

Results of Operations

Years Ended December 31, 2001 and 2000

Revenues from collaborative agreements decreased to approximately $1.3 million in 2001 from approximately $4.6 million in 2000. Substantially all of our revenues during 2001 were payments received by us under our collaborative agreement with Wyeth Nutrition.

Research and development expenses increased to approximately $14.9 million in 2001 from $12.1 million in 2000. The increase was primarily attributable to the addition of new employees in 2001 and the expenses associated with our San Diego facility, which we began leasing in April 2001. In addition, our joint venture with McNeil Nutritionals reimbursed Neose approximately $0.8 million, which was $0.8 million less than in 2000, for the cost of research and development services and supplies provided to the joint venture. The reimbursement amounts have been reflected as a reduction of research and development expense in our consolidated statements of operations for 2000 and 2001. We expect research and development expenses to increase significantly during 2002.

Marketing, general and administrative expenses increased to approximately $9.4 million in 2001 from $5.6 million in 2000. The increase was primarily attributable to the hiring of additional business development personnel, increased expenses for marketing GlycoAdvance, increased legal and filing expenses associated with our growing patent portfolio, and non-cash compensation expense associated with stock options. We expect marketing, general and administrative expenses to increase significantly during 2002.

We realized a gain of approximately $6.1 million in 2001 from the sale of shares of Genzyme General common stock, which we received as a result of Genzyme's acquisition of Novazyme Pharmaceuticals, Inc. in September 2001. Interest income decreased to approximately $3.7 million in 2001 from approximately $5.1 million in 2000 due to lower average cash and marketable securities balances and lower interest rates during 2001. Interest expense decreased to approximately $0.2 million in 2001 from approximately $0.5 million in 2000 due to lower average loan balances and lower interest rates during 2001.

Years Ended December 31, 2000 and 1999

Revenues from collaborative agreements increased to approximately $4.6 million in 2000 from approximately $0.4 million in 1999. Payments under our agreement with Bristol-Myers accounted for approximately $3.3 million of our collaborative revenues in 2000.

Research and development expenses increased to $12.1 million in 2000 from $10.6 million in 1999. The increase was primarily attributable to additional services rendered under our current research and development agreement with Bristol-Myers, and non-cash compensation expense associated with stock options granted to non-employees. During the year ended December 31, 2000, our joint venture with McNeil Nutritionals reimbursed Neose approximately $1.6 million for the cost of research and development services and supplies provided to the joint venture. This amount has been reflected as a reduction of research and development expense in our consolidated statements of operations.

Marketing, general and administrative expenses increased to $5.6 million in 2000 from $4.5 million in 1999. The increase was primarily attributable to the hiring of additional business development and administrative personnel, and the non-cash compensation expense associated with stock options granted to non-employees.

Interest income increased to $5.1 million in 2000 from $1.9 million in 1999 due to higher average cash and marketable securities balances during 2000 resulting from our public offering of 2.3 million shares of common stock in March 2000. Interest expense increased to $0.5 million in 2000 from $0.4 million in 1999 due to higher average interest rates, and was partly offset by lower average loan balances outstanding during 2000.

Liquidity and Capital Resources

We have incurred operating losses each year since our inception. As of December 31, 2001, we had an accumulated deficit of approximately $82 million. We have financed our operations through private and public offerings of our securities, and revenues from our collaborative agreements. We had approximately $76 million in cash and marketable securities as of December 31, 2001, compared to approximately $95 million in cash and marketable securities as of December 31, 2000. The decrease for 2001 was primarily attributable to the use of cash to fund our operating loss and capital expenditures, and was partly offset by the one-time sale of approximately $6.4 million of shares of common stock of Genzyme General. As part of its acquisition of Novazyme Pharmaceuticals, Inc. in 2001, Genzyme assumed Novazyme's obligation to pay us $1.6 million in November 2002.

During 1999, 2000, and 2001, we purchased approximately $1.2 million, $1.7 million, and $10.9 million of property, equipment, and building improvements. In 2001, we committed to make $17 million in capital expenditures to provide additional cGMP manufacturing capacity in our Horsham, Pennsylvania facility to support the initial requirements of our anticipated GlycoAdvance customers. As of December 31, 2001, we had expended approximately $8.2 million for this project.

In December 2001, we entered into a research, development and license agreement with Wyeth Pharmaceuticals, a division of Wyeth, for the use of our GlycoAdvance technology to develop an improved production system for Wyeth's

biopharmaceutical compound, recombinant PSGL-Ig (P-selectin glycoprotein ligand). rPSGL-Ig is being developed to treat inflammation and thrombosis associated with acute coronary syndrome and reperfusion injury. It is currently being evaluated in Phase II clinical trials for heart attack.

Under the agreement, we will receive license, research, and milestone payments that would total up to $17 million if all milestones are met. In addition to ongoing product payments, Neose and Wyeth would also enter into a supply agreement for the long-term supply of GlycoAdvance process reagents for their commercial production needs. In December 2001, we received an upfront-fee of $1 million, which is included in deferred revenue in our consolidated balance sheet as of December 31, 2001. We will amortize the up-front fee to revenue over the estimated four-year performance period.

In February 2002, we entered into a lease agreement for a 40,000 square foot building in Horsham, Pennsylvania. We intend to convert the facility into laboratory and office space for an expected cost of approximately $12 million. We plan to relocate research laboratories and corporate offices from our current facility in Horsham, Pennsylvania to the new facility, leaving our current facility available for future expansion of our cGMP manufacturing capacity.

We may finance some or all of these capital expenditures through the issuance of new debt. If we are able to issue new debt, we may be required to maintain a minimum cash and investments balance, transfer cash into an escrow account to collateralize some portion of the debt, or both.

In 2001, we announced a stock repurchase program authorizing the repurchase of up to one million shares of common stock in the open market at times and prices that we consider appropriate. During 2001, we purchased 6,000 shares of common stock in the open market for approximately $0.2 million.

In 1997, we issued, through the Montgomery County (Pennsylvania) Industrial Development Authority, $9.4 million of taxable and tax-exempt bonds, of which $6.2 million remains outstanding. The bonds were issued to finance the purchase of our previously leased building and the construction of a pilot-scale manufacturing facility within our building. The bonds are supported by an AA-rated letter of credit, and a reimbursement agreement between our bank and the letter of credit issuer. The interest rate on the bonds will vary weekly, depending on market rates for AA-rated taxable and tax-exempt obligations, respectively. During 2001, the weighted-average, effective interest rate was 5.3% per year, including letter-of-credit and other fees. The terms of the bond issuance provide for monthly, interest-only payments and a single repayment of principal at the end of the twenty-year life of the bonds. However, under our agreement with our bank, we are making monthly payments to an escrow account to provide for an annual prepayment of principal. As of December 31, 2001, we had restricted funds relating to the bonds of approximately $0.9 million, which consisted of our monthly payments to an escrow account plus interest revenue on the balance of the escrow account.

To provide credit support for this arrangement, we have given a first mortgage on the land, building, improvements, and certain machinery and equipment to our bank. We have also agreed to a covenant to maintain a minimum required cash and short-term investments balance of at least two times the current loan balance. At December 31, 2001, we were required to maintain a cash and short-term investments balance of $12.4 million. If we fail to comply with this covenant, we are required to deposit with the lender cash collateral up to, but not more than, the loan's unpaid balance.

We believe that our existing cash and short-term investments, expected revenue from collaborations and license arrangements, anticipated financing of capital expenditures, and interest income should be sufficient to meet our operating and capital requirements through at least 2003, although changes in our collaborative relationships or our business, whether or not initiated by us, may cause us to deplete our cash and short-term investments sooner than the above estimate. The timing and amount of our future capital requirements and the adequacy of available funds will depend on many factors, including if or when any products manufactured using our technology are commercialized.

The following table summarizes our obligations to make future payments under current contracts:

		Payments due by period			
	Total	Less than 1 Year	1 - 3 Years	4 - 5 Years	After 5 Years
Long-term debt	$ 6,200,000	$ 1,100,000	$ 2,500,000	$ 300,000	$ 2,300,000
Operating leases	11,371,000	517,000	2,299,000	965,000	7,590,000
Construction contract	8,800,000	8,800,000	—	—	—
Total contractual obligations	$ 26,371,000	$ 10,417,000	$ 4,799,000	$ 1,265,000	$ 9,890,000

Joint Venture with McNeil Nutritionals

We have a joint venture with McNeil Nutritionals. We account for our investment in the joint venture under the equity method, under which we recognize our share of the income and losses of the joint venture. In 1999, we reduced the carrying value of our initial investment in the joint venture of approximately $0.4 million to zero to reflect our share of the joint venture's losses. We recorded this amount as research and development expense in our consolidated statements of operations. We will record our share of post-1999 losses of the joint venture, however, only to the extent of our actual or committed investment in the joint venture.

The joint venture developed a process for making fructooligosaccharides and constructed a pilot facility in Athens, Georgia. In 2001, the joint venture closed the pilot facility as it shifted focus to a second generation bulking agent. The joint venture is exploring establishing a manufacturing arrangement with a third party to produce these bulking agents.

During the years ended December 31, 2000 and 2001, the joint venture reimbursed Neose approximately $1.6 million and $0.8 million, respectively, for the cost of research and development services and supplies provided to the joint venture. There were no such reimbursements during the year ended December 31, 1999. This amount has been reflected as a reduction of research and development expense in our consolidated statements of operations. As of December 31, 2001, the joint venture owed Neose approximately $0.2 million. This amount is included in prepaid expenses and other current assets in our consolidated balance sheet. We expect to provide significantly fewer research and development services during 2002, thereby significantly reducing our expected reimbursement from the joint venture.

If the joint venture becomes profitable, we will recognize our share of the joint venture's profits only after the amount of our capital contributions to the joint venture is equivalent to our share of the joint venture's accumulated losses. As of December 31, 2001, the joint venture had an accumulated loss since inception of approximately $9.8 million, of which our share, assuming a 50% ownership interest, is approximately $4.9 million. Until the joint venture is profitable, McNeil Nutritionals is required to fund, as a non-recourse, no-interest loan, all of the joint venture's aggregate capital expenditures in excess of an agreed-upon amount, and all of the joint venture's operating losses. The loan balance would be repayable by the joint venture to McNeil Nutritionals over a seven-year period commencing on the earlier of September 30, 2006 or the date on which Neose attains a 50% ownership interest in the joint venture after having had a lesser ownership interest. In the event of any dissolution of the joint venture, the loan balance would be payable to McNeil Nutritionals before any distribution of assets to us. As of December 31, 2001, the joint venture owed McNeil Nutritionals approximately $8.1 million.

We may be required to make additional investments in the joint venture to fund capital expenditures. If the joint venture builds additional production facilities, and we wish to have a 50% ownership interest in the joint venture, we are required to invest up to $8.9 million to fund half of such expenditures. However, we may elect to fund as little as $1.9 million of the cost of the facilities, so long as our aggregate investments in the joint venture are at least 15% of the joint venture's aggregate capital expenditures. In this case, McNeil Nutritionals will fund the remainder of our half of the joint venture's capital expenditures, and our ownership percentage will be proportionately reduced. We have an option, expiring in September 2006, to return to 50% ownership of the joint venture by reimbursing McNeil Nutritionals for this amount.

Recent Accounting Pronouncements

In June 2001, the Financial Accounting Standards Board finalized Statements of Financial Accounting Standards No. 141, "Business Combinations" (SFAS 141), and No. 142, "Goodwill and Other Intangible Assets" (SFAS 142), which are effective for fiscal years beginning after December 15, 2001. SFAS 141 requires all business combinations initiated after June 30, 2001 to be accounted for using the purchase method. SFAS 142 no longer requires the amortization of goodwill; rather, goodwill will be subject to a periodic assessment for impairment by applying a fair-value-based test. In addition, an acquired intangible asset should be separately recognized if the benefit of the intangible asset is obtained through contractual or other legal rights, or if the intangible asset can be sold, transferred, licensed, rented, or exchanged, regardless of the acquirer's intent to do so. Such acquired intangible assets will be amortized over their useful lives. All of our intangible assets were obtained through contractual rights and have been separately identified and recognized in our balance sheets. These intangibles are being amortized over their estimated useful lives or contractual lives as appropriate. Therefore, we do not expect the adoption of SFAS 142 in the first quarter of 2002 to have a material impact on our consolidated financial position or results of operations.

In October 2001, the Financial Accounting Standards Board issued Statement of Financial Accounting Standard No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets" (SFAS 144). SFAS 144 changes the accounting for long-lived assets by requiring that all long-lived assets be measured at the lower of carrying amount or fair value less cost to sell, whether included in reporting continuing operations or in discontinued operations. SFAS 144, which replaces SFAS 121 "Accounting for Impairment of Long-Lived Assets and for Assets to be Disposed of," is effective for fiscal years beginning after December 15, 2001. We do not believe SFAS 144 will have a material impact on our consolidated financial position or results of operations.

Report of Independent Public Accountants

To Neose Technologies, Inc.:

We have audited the accompanying consolidated balance sheets of Neose Technologies, Inc. (a Delaware corporation in the development stage) and subsidiaries as of December 31, 2000 and 2001, and the related consolidated statements of operations, stockholders' equity and comprehensive loss, and cash flows for each of the three years in the period ended December 31, 2001, and for the period from inception (January 17, 1989) to December 31, 2001. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

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

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Neose Technologies, Inc. and subsidiaries as of December 31, 2000 and 2001, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2001, and for the period from inception (January 17, 1989) to December 31, 2001, in conformity with accounting principles generally accepted in the United States.

Arthur Andersen LLP

Philadelphia, Pennsylvania
January 25, 2002

Consolidated Balance Sheets

(in thousands, except per share amounts)	Year ended December 31, 2000	2001
Assets		
Current assets:		
Cash and cash equivalents	$ 66,989	$ 76,245
Marketable securities	27,773	—
Restricted funds	893	902
Prepaid expenses and other current assets	583	1,635
Total current assets	96,238	78,782
Property and equipment, net	13,577	22,649
Other assets, net	4,953	4,355
Total assets	$114,768	$ 105,786
Liabilities and Stockholders' Equity		
Current liabilities:		
Current portion of long-term debt	$ 1,100	$ 1,100
Accounts payable	83	719
Accrued compensation	601	855
Accrued expenses	1,527	2,844
Deferred revenue	389	1,222
Total current liabilities	3,700	6,740
Long-term debt	6,200	5,100
Total liabilities	9,900	11,840
Commitments (Note 11)		
Stockholders' equity:		
Preferred stock, $.01 par value, 5,000 shares authorized, none issued	—	—
Common stock, $.01 par value, 30,000 shares authorized; 13,992 and 14,089 shares issued; 13,992 and 14,083 shares outstanding	140	141
Additional paid-in capital	173,757	176,124
Treasury stock, 6 shares at cost in 2001	—	(175)
Deferred compensation	(717)	(503)
Deficit accumulated during the development stage	(68,312)	(81,641)
Total stockholders' equity	104,868	93,946
Total liabilities and stockholders' equity	$114,768	$ 105,786

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

Consolidated Statements of Operations

(in thousands, except per share amounts)	Year ended December 31, 1999	2000	2001	Period from inception (January 17, 1989) to December 31, 2001
Revenue from collaborative agreements	$ 422	$ 4,600	$ 1,266	$ 12,633
Operating expenses:				
Research and development	10,649	12,094	14,857	78,504
Marketing, general and administrative	4,520	5,648	9,374	36,255
Total operating expenses	15,169	17,742	24,231	114,759
Operating loss	(14,747)	(13,142)	(22,965)	(102,126)
Gain on sale of marketable security	—	—	6,120	6,120
Interest income	1,862	5,111	3,704	17,670
Interest expense	(433)	(469)	(188)	(3,305)
Net loss	$ (13,318)	$ (8,500)	$ (13,329)	$ (81,641)
Basic and diluted net loss per share	$ (1.25)	$ (0.63)	$ (0.95)	
Basic and diluted weighted-average shares outstanding	10,678	13,428	14,032	

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

Consolidated Statements of Stockholders' Equity and Comprehensive Loss

(in thousands)	Convertible Preferred Stock Shares	Convertible Preferred Stock Amount	Common Stock Shares	Common Stock Amount	Additional paid-in capital	Treasury Stock	Deferred compensation	Deficit accumulated during the development stage	Unrealized gains on marketable securities	Comprehensive loss accumulated during the development stage
Balance, January 17, 1989 (inception)	—	$ —	—	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Initial issuance of common stock	—	—	1,302	13	(3)	—	—	—	—	—
Shares issued pursuant to consulting, licensing, and antidilutive agreements	—	—	329	3	(1)	—	—	—	—	—
Sale of common stock	—	—	133	1	1	—	—	—	—	—
Net loss	—	—	—	—	—	—	—	(460)	—	(460)
Balance, December 31, 1990	—	—	1,764	17	(3)	—	—	(460)	—	(460)
Sale of stock	1,517	15	420	4	4,499	—	(7)	—	—	—
Shares issued pursuant to consulting and antidilutive agreements	—	—	145	1	—	—	—	—	—	—
Capital contributions	—	—	—	—	10	—	—	—	—	—
Dividends on preferred stock	—	—	—	—	(18)	—	—	—	—	—
Net loss	—	—	—	—	—	—	—	(1,865)	—	(1,865)
Balance, December 31, 1991	1,517	15	2,329	22	4,488	—	(7)	(2,325)	—	(2,325)
Sale of stock	260	2	17	—	2,344	—	—	—	—	—
Shares issued pursuant to redemption of notes payable	—	—	107	1	682	—	—	—	—	—
Exercise of stock options and warrants	—	—	21	—	51	—	—	—	—	—
Amortization of deferred compensation	—	—	—	—	—	—	5	—	—	—
Dividends on preferred stock	—	—	—	—	(36)	—	—	—	—	—
Net loss	—	—	—	—	—	—	—	(3,355)	—	(3,355)
Balance, December 31, 1992	1,777	17	2,474	23	7,529	—	(2)	(5,680)	—	(5,680)
Sale of preferred stock	250	3	—	—	1,997	—	—	—	—	—
Shares issued to licensor	—	—	3	—	—	—	—	—	—	—
Shares issued to preferred stockholder in lieu of cash dividends	—	—	1	—	18	—	—	—	—	—
Amortization of deferred compensation	—	—	—	—	—	—	2	—	—	—
Dividends on preferred stock	—	—	—	—	(36)	—	—	—	—	—
Net loss	—	—	—	—	—	—	—	(2,423)	—	(2,423)
Balance, December 31, 1993	2,027	20	2,478	23	9,508	—	—	(8,103)	—	(8,103)
Sale of preferred stock	2,449	25	—	—	11,040	—	—	—	—	—
Exercise of stock options	—	—	35	1	14	—	—	—	—	—
Shares issued to preferred stockholder in lieu of cash dividends	—	—	10	1	53	—	—	—	—	—
Dividends on preferred stock	—	—	—	—	(18)	—	—	—	—	—
Net loss	—	—	—	—	—	—	—	(6,212)	—	(6,212)
Balance, December 31, 1994	4,476	45	2,523	25	20,597	—	—	(14,315)	—	(14,315)
Sale of preferred stock	2,721	27	—	—	10,065	—	—	—	—	—
Exercise of stock options and warrants	—	—	116	1	329	—	—	—	—	—
Shares issued to employees in lieu of cash compensation	—	—	8	—	44	—	—	—	—	—
Deferred compensation related to grant of stock options	—	—	—	—	360	—	(360)	—	—	—
Shares issued to stockholder related to the initial public offering	—	—	23	—	—	—	—	—	—	—
Shares issued to preferred stockholder in lieu of cash dividends	—	—	3	—	18	—	—	—	—	—
Dividends on preferred stock	—	—	—	—	(36)	—	—	—	—	—
Conversion of preferred stock into common stock	(1,417)	(14)	472	5	9	—	—	—	—	—
Net loss	—	—	—	—	—	—	—	(5,067)	—	(5,067)
Balance, December 31, 1995	5,780	$ 58	3,145	$ 31	$ 31,386	$ —	$ (360)	$(19,382)	$ —	$(19,382)

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

Consolidated Statements of Stockholders' Equity and Comprehensive Loss

(in thousands)	Convertible Preferred Stock Shares	Convertible Preferred Stock Amount	Common Stock Shares	Common Stock Amount	Additional paid-in capital	Treasury Stock	Deferred compensation	Deficit accumulated during the development stage	Unrealized gains on marketable securities	Comprehensive loss accumulated during the development stage
Dividends on preferred stock	—	$ —	—	$ —	$ (18)	$ —	$ —	$ —	$ —	$ —
Sale of common stock in initial public offering	—	—	2,588	26	29,101	—	—	—	—	—
Conversion of preferred stock into common stock	(5,780)	(58)	2,411	24	34	—	—	—	—	—
Exercise of stock options and warrants	—	—	65	1	162	—	—	—	—	—
Shares issued pursuant to employee stock purchase plan	—	—	6	—	60	—	—	—	—	—
Deferred compensation related to acceleration of option vesting	—	—	—	—	106	—	—	—	—	—
Amortization of deferred compensation	—	—	—	—	—	—	90	—	—	—
Net loss	—	—	—	—	—	—	—	(6,141)	—	(6,141)
Balance, December 31, 1996	—	—	8,215	82	60,831	—	(270)	(25,523)	—	(25,523)
Sale of common stock in public offering	—	—	1,250	13	20,326	—	—	—	—	—
Exercise of stock options and warrants	—	—	42	—	139	—	—	—	—	—
Shares issued pursuant to employee stock purchase plan	—	—	18	—	189	—	—	—	—	—
Deferred compensation related to grants of stock options	—	—	—	—	322	—	(322)	—	—	—
Amortization of deferred compensation	—	—	—	—	—	—	231	—	—	—
Net loss	—	—	—	—	—	—	—	(9,064)	—	(9,064)
Balance, December 31, 1997	—	—	9,525	95	81,807	—	(361)	(34,587)	—	(34,587)
Exercise of stock options	—	—	49	1	261	—	—	—	—	—
Shares issued pursuant to employee stock purchase plan	—	—	15	—	171	—	—	—	—	—
Deferred compensation related to grants of stock options	—	—	—	—	161	—	(161)	—	—	—
Amortization of deferred compensation	—	—	—	—	—	—	311	—	—	—
Unrealized gains on marketable securities	—	—	—	—	—	—	—	—	222	222
Net loss	—	—	—	—	—	—	—	(11,907)	—	(11,907)
Balance, December 31, 1998	—	—	9,589	96	82,400	—	(211)	(46,494)	222	(46,272)
Sales of common stock in private placements	—	—	1,786	18	17,398	—	—	—	—	—
Exercise of stock options and warrants	—	—	43	—	263	—	—	—	—	—
Shares issued pursuant to employee stock purchase plan	—	—	16	—	156	—	—	—	—	—
Deferred compensation related to grants of stock options	—	—	—	—	796	—	(796)	—	—	—
Amortization of deferred compensation	—	—	—	—	—	—	477	—	—	—
Unrealized gains on marketable securities	—	—	—	—	—	—	—	—	(222)	(222)
Net loss	—	—	—	—	—	—	—	(13,318)	—	(13,318)
Balance, December 31, 1999	—	—	11,434	114	101,013	—	(530)	(59,812)	—	(59,812)
Sales of common stock in public offering	—	—	2,300	23	68,582	—	—	—	—	—
Exercise of stock options and warrants	—	—	247	3	2,735	—	—	—	—	—
Shares issued pursuant to employee stock purchase plan	—	—	11	—	157	—	—	—	—	—
Deferred compensation related to grants of stock options	—	—	—	—	1,270	—	(1,270)	—	—	—
Amortization of deferred compensation	—	—	—	—	—	—	1,083	—	—	—
Net loss	—	—	—	—	—	—	—	(8,500)	—	(8,500)
Balance, December 31, 2000	—	—	13,992	140	173,757	—	(717)	(68,312)	—	(68,312)
Exercise of stock options and warrants	—	—	79	1	867	—	—	—	—	—
Shares issued pursuant to employee stock purchase plan	—	—	18	—	335	—	—	—	—	—
Acquisition of treasury stock, 6 shares at cost	—	—	(6)	—	—	(175)	—	—	—	—
Deferred compensation related to grants of stock options	—	—	—	—	1,165	—	(1,165)	—	—	—
Amortization of deferred compensation	—	—	—	—	—	—	1,379	—	—	—
Net loss	—	—	—	—	—	—	—	(13,329)	—	(13,329)
Balance, December 31, 2001	**—**	**$ —**	**14,083**	**$141**	**$176,124**	**$(175)**	**$ (503)**	**$(81,641)**	**$ —**	**$(81,641)**

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

Consolidated Statements of Cash Flows

(in thousands)	Year ended December 31, 1999	2000	2001	Period from inception (January 17, 1989) to December 31, 2001
Cash flows from operating activities:				
Net loss	$ (13,318)	$ (8,500)	$ (13,329)	$ (81,641)
Adjustments to reconcile net loss to cash used in operating activities:				
Depreciation and amortization	1,695	2,051	2,422	10,734
Non-cash compensation	477	1,083	1,379	3,578
Common stock issued for non-cash and other charges	—	—	—	35
Changes in operating assets and liabilities:				
Prepaid expenses and other current assets	117	(465)	(1,052)	(1,635)
Accounts payable	192	(154)	636	719
Accrued compensation	125	146	254	855
Accrued expenses	697	(405)	(208)	362
Deferred revenue	805	(416)	833	1,222
Net cash used in operating activities	(9,210)	(6,660)	(9,065)	(65,771)
Cash flows from investing activities:				
Purchases of property and equipment	(1,207)	(1,455)	(9,371)	(28,557)
Proceeds from sale-leaseback of equipment	—	—	—	1,382
Purchases of marketable securities	(88,662)	(81,077)	(103,465)	(324,327)
Proceeds from sales of marketable securities	8,882	—	—	11,467
Proceeds from maturities of and other changes in marketable securities	79,227	76,174	131,238	312,860
Purchase of acquired technology	(3,550)	(1,000)	—	(4,550)
Purchase of preferred stock	—	(1,250)	—	(1,250)
Restricted cash related to acquired technology	(1,500)	1,500	—	—
Net cash provided by (used in) investing activities	(6,810)	(7,108)	18,402	(32,975)
Cash flows from financing activities:				
Proceeds from issuance of debt	—	—	—	11,955
Repayment of debt	(617)	(1,000)	(1,100)	(7,052)
Restricted cash related to debt	(317)	(108)	(9)	(831)
Proceeds from issuance of preferred stock, net	—	—	—	29,497
Proceeds from issuance of common stock, net	17,572	68,762	335	136,840
Proceeds from exercise of stock options and warrants	263	2,738	868	4,829
Acquisition of treasury stock	—	—	(175)	(175)
Dividends paid	—	—	—	(72)
Net cash provided by (used in) financing activities	16,901	70,392	(81)	174,991
Net increase in cash and cash equivalents	881	56,624	9,256	76,245
Cash and cash equivalents, beginning of period	9,484	10,365	66,989	—
Cash and cash equivalents, end of period	$ 10,365	$ 66,989	$ 76,245	$ 76,245
Supplemental disclosure of cash flow information:				
Cash paid for interest	$ 429	$ 481	$ 284	$ 3,303
Non-cash investing activities:				
Accrued property and equipment	$ —	$ 275	$ 1,800	$ 2,075
Non-cash financing activities:				
Issuance of common stock for dividends	$ —	$ —	$ —	$ 90
Issuance of common stock to employees in lieu of cash compensation	$ —	$ —	$ —	$ 44

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

Note 1. Background

Neose develops proprietary technologies for the synthesis and manufacture of complex carbohydrates. Our enzymatic technology platform makes feasible the synthesis and modification of a wide range of complex carbohydrates, which are chains of simple sugar molecules that can be joined together in many different combinations. Our platform enables the production and manipulation of complex carbohydrates either as stand-alone carbohydrate molecules or as carbohydrate structures attached to recombinant therapeutic glycoproteins and glycolipids.

Our GlycoAdvance program uses our technology to complete the human carbohydrate structures on therapeutic glycoproteins. We are also developing our technology to create novel glycosylation patterns, and to link other molecules, such as polyethylene glycol, to glycoproteins. The application of this technology to proteins potentially results in improved clinical activity and pharmacokinetic profile, enhanced drug development flexibility, stronger and additional patent claims, and yield improvements.

Our GlycoTherapeutics program uses our technology to enable the development of carbohydrate-based therapeutics. Our GlycoActives program uses our technology to develop novel carbohydrate food and nutritional ingredients. Neose was initially incorporated in January 1989, and began operations in October 1990.

Note 2. Summary of Significant Accounting Policies

Principles of Consolidation

The consolidated financial statements include the accounts of Neose Technologies, Inc. and its wholly-owned subsidiaries, and reflect the elimination of all significant intercompany accounts and transactions.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires us to make estimates and assumptions. Those estimates and assumptions affect the reported amounts of assets and liabilities as of the date of the financial statements, the disclosure of contingent assets and liabilities as of the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Cash and Cash Equivalents

We consider all highly liquid investments with a maturity of three months or less on the date of purchase to be cash equivalents. As of December 31, 2000 and 2001, cash equivalents consisted of securities and obligations of either the U.S. Treasury or U.S. government agencies.

Marketable Securities

Although we held no marketable securities as of December 31, 2001, we often invest in marketable securities. We determine the appropriate classification of our debt securities at the time of purchase and re-evaluate such designation as of each balance sheet date. Marketable securities that we have the positive intent and ability to hold to maturity are classified as held-to-maturity securities and recorded at amortized cost. Our other marketable securities are classified as available-for-sale securities and are carried at fair value, based on quoted market prices, with unrealized gains and losses reported as a separate component of stockholders' equity. All realized gains and losses on our available-for-sale securities, computed using specific identification, and any declines in value determined to be permanent are recognized in our consolidated statements of operations.

Marketable securities consist of investments that have a maturity of more than three months on the date of purchase. To help maintain the safety and liquidity of our marketable securities, we have established guidelines for the concentration, maturities, and credit ratings of our investments.

Comprehensive Loss

Our comprehensive loss for the years ended December 31, 1999, 2000, and 2001 was approximately $13.5 million, $8.5 million and $13.3 million, respectively. Comprehensive loss is comprised of net loss and other comprehensive income or loss. Our only source of other comprehensive income or loss is unrealized gains and losses on our marketable securities that are classified as available-for-sale.

Property and Equipment

Property and equipment are stated at cost. Property and equipment capitalized under capital leases are recorded at the present value of the minimum lease payments due over the lease term. Depreciation and amortization are provided using the straight-line method over the estimated useful lives of the related assets or the lease term, whichever is shorter. We use depreciable lives of three to seven years for laboratory and office equipment, and seventeen to twenty years for building and improvements. Expenditures for maintenance and repairs are charged to expense as incurred, and expenditures for major renewals and improvements are capitalized.

Impairment of Long-Lived Assets

As required by Statement of Financial Accounting Standards No. 121, "Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed of," we assess the recoverability of any long-lived assets for which an indicator of impairment exists. Specifically, we calculate, and recognize, any impairment losses by comparing the carrying value of these assets to our estimate of the undiscounted future operating cash flows. Although our current and his-

torical negative cash flows are indicators of impairment, we believe the future cash flows to be received from our long-lived assets will exceed the assets' carrying value. Accordingly, we have not recognized any impairment losses through December 31, 2001.

Research and Development

Research and development costs are charged to expense as incurred.

Income Taxes

We account for income taxes in accordance with Statement of Financial Accounting Standards No. 109, "Accounting for Income Taxes." The objective of this pronouncement is to recognize and measure, using enacted tax laws, the amount of current and deferred income taxes payable or refundable at the date of the financial statements as a result of all events that have been recognized in the financial statements.

Revenue Recognition

Revenue from collaborative agreements consists of up-front fees, research and development funding, and milestone payments. Non-refundable up-front fees are deferred and amortized to revenue over the related performance period. Periodic payments for research and development activities are recognized over the period in which we perform those activities under the terms of each agreement. Revenue resulting from the achievement of milestone events stipulated in the agreements is recognized when the milestone is achieved.

In December 1999, the Securities and Exchange Commission staff issued Staff Accounting Bulletin No. 101, "Revenue Recognition in Financial Statements" (SAB 101). The bulletin draws on existing accounting rules and provides specific guidance on how those accounting rules should be applied, and specifically addresses revenue recognition for non-refundable technology access fees in the biotechnology industry. We adopted SAB 101 in the fourth quarter of 2000, effective for all of 2000. SAB 101 had no impact on our financial position or results of operations, as our revenue recognition policy was consistent with SAB 101.

Net Loss Per Share

Basic loss per share is computed by dividing net loss by the weighted-average number of common shares outstanding for the period. Diluted loss per share reflects the potential dilution from the exercise or conversion of securities into common stock. For the years ended December 31, 1999, 2000, and 2001, the effects of the exercise of outstanding stock options and warrants were antidilutive; accordingly, they were excluded from the calculation of diluted earnings per share. See Notes 9 and 10 for a summary of outstanding warrants and options.

Fair Value of Financial Instruments

As of December 31, 2001, the carrying values of cash and cash equivalents, restricted funds, accounts payable, accrued expenses, and accrued compensation approximate their respective fair values. In addition, we believe the carrying value of our debt instrument, which does not have a readily ascertainable market value, approximates its fair value.

Recent Accounting Pronouncements

In June 2001, the Financial Accounting Standards Board finalized Statements of Financial Accounting Standards No. 141, "Business Combinations" (SFAS 141), and No. 142, "Goodwill and Other Intangible Assets" (SFAS 142), which are effective for fiscal years beginning after December 15, 2001. SFAS 141 requires all business combinations initiated after June 30, 2001 to be accounted for using the purchase method. SFAS 142 no longer requires the amortization of goodwill; rather, goodwill will be subject to a periodic assessment for impairment by applying a fair-value-based test. In addition, an acquired intangible asset should be separately recognized if the benefit of the intangible asset is obtained through contractual or other legal rights, or if the intangible asset can be sold, transferred, licensed, rented, or exchanged, regardless of the acquirer's intent to do so. Such acquired intangible assets will be amortized over their estimated useful lives. All of our intangible assets were obtained through contractual rights and have been separately identified and recognized in our consolidated balance sheets. These intangibles are being amortized over their estimated useful lives or contractual lives as appropriate. Therefore, we do not expect the adoption of SFAS 142 in the first quarter of 2002 to have any effect on our consolidated financial position or results of operations.

In October 2001, the Financial Accounting Standards Board issued Statement of Financial Accounting Standard No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets" (SFAS 144). SFAS 144 changes the accounting for long-lived assets by requiring that all long-lived assets be measured at the lower of the carrying amount or fair value less cost to sell, whether included in reporting continuing operations or in discontinued operations. SFAS 144, which replaces SFAS 121 "Accounting for Impairment of Long-Lived Assets and for Assets to be Disposed of," is effective for fiscal years beginning after December 15, 2001. We do not believe SFAS 144 will have a material impact on our consolidated financial position or results of operations.

Reclassification

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

Note 3. Collaborative Agreements

Agreement with Wyeth Pharmaceuticals

In December 2001, we entered into a research, development and license agreement with Wyeth Pharmaceuticals, a division of Wyeth, for the use of our GlycoAdvance technology to develop an improved production system for Wyeth's biopharmaceutical compound, recombinant PSGL-Ig (P-selectin glycoprotein ligand). rPSGL-Ig is being developed to treat inflammation and thrombosis associated with acute coronary syndrome and reperfusion injury. It is currently being evaluated in Phase II clinical trials for heart attack.

Under the agreement, we will develop processes for the commercial-scale manufacture of GlycoAdvance enzymes and sugar nucleotides to be used in the production of rPSGL-Ig, and will license GlycoAdvance technology to Wyeth for commercial production of the drug, if regulatory approval is obtained. During commercial production of Wyeth's current rPSGL-Ig, we would receive ongoing payments tied to yield improvements achieved using GlycoAdvance. In addition, Wyeth has the option to use GlycoAdvance to develop a next generation rPSGL-Ig, in which case we would receive development payments and royalties on product sales.

We will receive license, research, and milestone payments that will total up to $17 million if all milestones are met. In addition to ongoing product payments, Neose and Wyeth would also enter into a supply agreement for the long-term supply of GlycoAdvance process reagents for their commercial production needs. In December 2001, we received an upfront-fee of $1 million, which is included in deferred revenue in our consolidated balance sheet as of December 31, 2001. We will amortize the up-front fee to revenue over the estimated four-year performance period.

Wyeth may not receive regulatory approval to market rPSGL-Ig, Wyeth may choose not to commercialize rPSGL-Ig, Wyeth may choose not to use GlycoAdvance services or products to commercialize rPSGL-Ig, or we may not succeed in developing an improved production system for rPSGL-Ig.

Agreement with Wyeth Nutrition

We entered into an agreement in 1999 with Wyeth Nutrition, a business unit of Wyeth Pharmaceuticals, to develop a manufacturing process for a bioactive carbohydrate to be used as an ingredient in Wyeth's infant and pediatric nutritional formula products. We are receiving contract development payments, and will receive payments if we achieve milestones specified in the agreement. If Wyeth commercializes an ingredient under this agreement, we will sell product to Wyeth at minimum specified transfer prices.

In 1999, we received from Wyeth a non-refundable, up-front license fee of $0.5 million, which we are recognizing as revenue ratably over the estimated three-year performance period. During the years ended December 31, 1999, 2000, and 2001, we recorded revenues of $0.2 million, $1.2 million, and $1.2 million, respectively, from Wyeth.

Under our agreement with Wyeth, we are responsible for developing a large-scale manufacturing process for a potential ingredient in infant formula. We may be unable to complete this development successfully, or be successful in commercial scale-up of these processes. Even if we successfully develop a process and fulfill all of our obligations under the agreement, Wyeth may fail to obtain regulatory approval to market the ingredient. Even if Wyeth obtains regulatory approval for the ingredient, Wyeth may elect not to add the ingredient to any of its products.

Agreement with McNeil Nutritionals

In 1999, we entered into a joint venture with McNeil Nutritionals, a subsidiary of Johnson & Johnson, to explore the inexpensive enzymatic production of complex carbohydrates for use as bulking agents. Neose and McNeil Nutritionals own the joint venture equally. Each of Neose and McNeil Nutritionals contributed various intellectual property to the joint venture. In addition, McNeil Nutritionals contributed to the joint venture the pilot commercial manufacturing facility, for which 50% of the cost will be reimbursed by the joint venture. McNeil Nutritionals has the exclusive right to purchase the joint venture's bulking agent for use in specified consumer product applications at a constant mark-up over the joint venture's cost of production.

The joint venture developed a process for making fructooligosaccharides and constructed a pilot facility in Athens, Georgia. In 2001, the joint venture closed the pilot facility as it shifted focus to a second generation bulking agent. The joint venture is exploring establishing a manufacturing arrangement with a third party to produce these bulking agents.

We account for our investment in the joint venture under the equity method, under which we recognize our share of the income and losses of the joint venture. In 1999, we reduced the carrying value of our initial investment in the joint venture of approximately $0.4 million to zero to reflect our share of the joint venture's losses. We recorded this amount as research and development expense in our consolidated statements of operations. We will record our share of post-1999 losses of the joint venture, however, only to the extent of our actual or committed investment in the joint venture.

For the year ended December 31, 2001, the joint venture had a net loss and a loss from continuing operations of approximately $6.5 million. The joint venture had no revenues during 2001. As of December 31, 2001, the joint venture had no assets, $0.2 million of current liabilities, and $8.1 million noncurrent liabilities, which consisted of amounts owed to McNeil Nutritionals.

If the joint venture becomes profitable, we will recognize our share of the joint venture's profits only after the amount of our capital contributions to the joint venture is equivalent to our share of the joint venture's accumulated loss. As of December 31, 2001, the joint venture had accumulated losses since inception of approximately $9.8 million, of which our share, assuming a 50% ownership interest, is approximately $4.9 million. Until the joint venture is profitable, McNeil Nutritionals is required to fund, as a non-recourse, no-interest loan, all of the joint venture's aggregate capital expenditures in excess of an agreed-upon amount, and all of the joint venture's operating losses. The loan balance would be repayable by the joint venture to McNeil Nutritionals over a seven-year period commencing on the earlier of September 30, 2006 or the date on which Neose attains a 50% ownership interest in the joint venture after having had a lesser ownership interest. In the event of any dissolution of the joint venture, the loan balance would be payable to McNeil Nutritionals before any distribution of assets to us.

During the years ended December 31, 2000 and 2001, the joint venture reimbursed Neose approximately $1.6 million and $0.8 million, respectively, for the cost of research and development services and supplies provided to the joint venture. There were no such reimbursements during the year ended December 31, 1999. This amount has been reflected as a reduction of research and development expense in our consolidated statements of operations. As of December 31, 2001, the joint venture owed Neose approximately $0.2 million. This amount is included in prepaid expenses and other current assets in our consolidated balance sheet.

We may be required to make additional investments in the joint venture to fund capital expenditures. If the joint venture builds additional production facilities, and we wish to have a 50% ownership interest in the joint venture, we are required to invest up to $8.9 million to fund half of such expenditures. However, we may elect to fund as little as $1.9 million of the cost of the facilities, so long as our aggregate investments in the joint venture are at least 15% of the joint venture's aggregate capital expenditures. In this case, McNeil Nutritionals will fund the remainder of our half of the joint venture's capital expenditures, and our ownership percentage will be proportionately reduced. We have an option, expiring in September 2006, to return to 50% ownership of the joint venture by reimbursing McNeil Nutritionals for this amount.

The success of our joint venture with McNeil Nutritionals is dependent upon the joint venture's ability to develop, manufacture, sell, and market successfully complex carbohydrates, all of which are in early stages.

Agreement with Progenics Pharmaceuticals

In May 2001, Bristol-Myers Squibb assigned to Progenics Pharmaceuticals our agreement with Bristol-Myers to develop two synthetic gangliosides for use in two cancer vaccines, GMK and MGV. Progenics is continuing with the development of both vaccines and we are in discussions with them concerning future supply of material for clinical and commercial use, but we will receive no revenue from this agreement unless it is renegotiated. During the years ended December 31, 1999 and 2000, we recorded revenues of $0.2 million and $3.3 million, respectively, from Bristol-Myers. We recorded no revenues related to this collaboration during 2001.

Note 4. Marketable Securities

As of December 31, 2000, marketable securities consisted of securities and obligations of either the U.S. Treasury or U.S. government agencies. These securities are classified as held-to-maturity. Held-to-maturity securities represent those securities for which we have the intent and ability to hold to maturity, and are carried at amortized cost. Interest on these securities, as well as amortization of discounts and premiums, is included in interest income.

During the year ended December 31, 1999, we received proceeds from the sales of marketable securities of approximately $8.9 million. Realized gains on these sales for the year ended December 31, 1999 were approximately $0.8 million. We had no sales of marketable securities, or associated realized gains, during the years ended December 31, 2000 and 2001.

Note 5. Property and Equipment

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

December 31,	2000	2001
Building and improvements	$ 13,904	$ 14,482
Laboratory and office equipment	6,112	8,227
	20,016	22,709
Less accumulated depreciation	(7,139)	(8,956)
	12,877	13,753
Land	700	700
Construction-in-Progress	—	8,196
	$ 13,577	$ 22,649

In 2001, we capitalized approximately $0.1 million of interest expense in connection with the construction-in-progress. Depreciation expense was approximately $1.4 million, $1.5 million, and $1.8 million for the years ended December 31, 1999, 2000, and 2001, respectively.

Note 6. Other Assets

Investment in Genzyme General

In 2000, we invested approximately $0.6 million in an 8% convertible subordinated debenture, which included a warrant to purchase shares of common stock, issued by Novazyme Pharmaceuticals, Inc. The investment was charged to expense in the consolidated statement of operations for 2000 due to uncertainty regarding collectibility. In March 2001, Novazyme committed to pay us approximately $1.6 million in November 2002 in exchange for restructuring our agreement. Due to uncertainty regarding collectibility, we elected to defer recognizing this amount as revenue until receiving payment. In September 2001, Genzyme General acquired Novazyme. As a result, we exercised our warrant to purchase shares of Novazyme, converted our debenture into shares of Novazyme, and exchanged our shares of Novazyme for shares of Genzyme. In 2001, we realized a gain of approximately $6.1 million on the sale of Genzyme shares. Genzyme also assumed Novazyme's obligation to pay us approximately $1.6 million in November 2002. This amount will be reflected as other income in our consolidated statements of operations upon receipt of the payment.

Acquired Technology

In March 1999, we acquired the carbohydrate-manufacturing patents, licenses, and other intellectual property of Cytel Corporation for aggregate consideration of $4.8 million, of which $1.3 million was paid in 2000 to Epimmune, Inc., Cytel's successor corporation, as it satisfied certain milestones relating to the acquired patents and licenses. We charged $0.2 million of the $4.8 million to research and development expense in our consolidated statements of operations in 1998. The acquired intellectual property consists of core technology with alternative future uses. We have capitalized, therefore, the remaining $4.6 million as acquired technology, which is included in other assets in our consolidated balance sheets.

The acquired technology balance is being amortized to research and development expense in our consolidated statements of operations over eight years, which is the estimated useful life of the technology. Amortization expense relating to the acquired technology for the years ended December 31, 1999, 2000, and 2001 was approximately $0.4 million, $0.5 million, and $0.6 million, respectively. The net book value of the acquired technology was $3.7 million and $3.1 million as of December 31, 2000 and 2001, respectively.

Investment in Convertible Preferred Stock

In June 2000, we made an investment of $1.3 million in convertible preferred stock of Neuronyx, Inc., and entered into a research and development collaboration with Neuronyx for the discovery and development of drugs for treating Parkinson's disease and other neurological diseases. The collaboration agreement provides for each of Neose and Neuronyx to perform and fund specific tasks, and to share in any financial benefits of the collaboration. We incurred research and development expense related to this collaboration of approximately $0.4 million and $1.0 million for the years ended December 31, 2000 and 2001, respectively. Our equity investment, which represents an ownership interest of approximately 4%, was made on the same terms as other unaffiliated investors. Accordingly, we have stated the investment at cost. We will continue to evaluate the realizability of this investment and record, if necessary, appropriate impairments in value. No such impairments have occurred as of December 31, 2001.

Note 7. Long-Term Debt

In 1997, we issued, through the Montgomery County (Pennsylvania) Industrial Development Authority, $9.4 million of taxable and tax-exempt bonds. The bonds were issued to finance the purchase of our previously leased building and the construction of a pilot-scale manufacturing facility within our building. The bonds are supported by an AA-rated letter of credit, and a reimbursement agreement between our bank and the letter of credit issuer. The interest rate on the bonds will vary weekly, depending on market rates for AA-rated taxable and tax-exempt obligations, respectively. During 1999, 2000, and 2001, the weighted-average, effective interest rate was 6.5%, 7.5%, and 5.3% per year, including letter-of-credit and other fees.

The terms of the bond issuance provide for monthly, interest-only payments and a single repayment of principal at the end of the twenty-year life of the bonds. However, under our agreement with our bank, we are making monthly payments to an escrow account to provide for an annual prepayment of principal. As of December 31, 2001, we had restricted funds relating to the bonds of $0.9 million, which consisted of our monthly payments to an escrow account plus interest earned on the balance of the escrow account.

To provide credit support for this arrangement, we have given a first mortgage on the land, building, improvements, and certain machinery and equipment to our bank. The net book value of the pledged assets is $8.4 million as of December 31, 2001. We have also agreed to a covenant to maintain a minimum required cash and short-term investments balance of at least two times the current loan balance. As of December 31, 2001, we were required to maintain a cash and short-term investments balance of $12.4 million. If we fail to comply with this covenant, we are required to deposit with the lender cash collateral up to, but not more than, the loan's unpaid balance, which was $6.2 million as of December 31, 2001.

Minimum principal repayments of long-term debt as of December 31, 2001 were as follows (in thousands): 2002—$1,100; 2003—$1,200; 2004—$1,200; 2005—$100; 2006—$200; and thereafter — $2,400 (2007—$100; 2008 through 2011—$200; 2012—$300; 2013—$200; 2014—$300; 2015—$200; 2016—$300; and 2017—$200).

Note 8. Accrued Expenses

Accrued expenses consisted of the following (in thousands):

December 31,	2000	2001
Accrued property and equipment	$ 275	$ 1,800
Accrued outside research expenses	400	286
Accrued professional fees	360	340
Accrued other expenses	492	418
	$ 1,527	$ 2,844

Note 9. Stockholders' Equity

Common Stock

During 2001, we purchased 6,000 shares of our common stock in the open market for approximately $0.2 million, or an average price of approximately $29.00 per share.

In March 2000, we offered and sold 2.3 million shares of our common stock at a public offering price of $32.00 per share. Our net proceeds from the offering after the payment of underwriting fees and offering expenses were approximately $68.6 million.

In June 1999, we sold 1.5 million shares of common stock in a private placement to a group of institutional and individual investors at a price of $9.50 per share, generating net proceeds of approximately $13.4 million. In January 1999, we sold 286,097 shares of common stock to Johnson & Johnson Development Corporation at a price of $13.98 per share, generating net proceeds of $4 million.

In January 1997, we sold 1,250,000 shares of common stock in a public offering at a price of $17.50 per share. Our net proceeds from this offering after the payment of placement fees and offering expenses were approximately $20.3 million.

Our initial public offering closed in February 1996. We sold 2,587,500 shares of common stock, which included the exercise of the underwriters' over-allotment option in March 1996, at a price of $12.50 per share. Our net proceeds from this offering after the underwriting discount and payment of offering expenses were approximately $29.1 million. In connection with this offering, all outstanding shares of Series A, C, D, E, and F Convertible Preferred Stock converted into 2,410,702 shares of common stock. Some of these common shares have registration rights.

From 1991 through 1995, we sold 7,196,884 shares of Series A, B, C, D, E, and F Convertible Preferred Stock. On December 7, 1995, all outstanding shares of Series B Convertible Preferred Stock converted into 472,249 shares of common stock. As discussed above, in connection with the initial public offering, all outstanding shares of Series A, C, D, E, and F converted into 2,410,702 shares of common stock.

Warrant

In June 1995, we granted a warrant to an equipment finance company to purchase 10,527 shares of common stock at $14.25 per share. The stock warrant, which expires on June 30, 2002, remained outstanding as of December 31, 2001.

Shareholder Rights Plan

In September 1997, we adopted a Shareholder Rights Plan. Under this plan, which was amended in December 1998, holders of common stock are entitled to receive one right for each share of common stock held. Separate rights certificates would be issued and become exercisable if any acquiring party either accumulates or announces an offer to acquire at least 15% of our common stock. Each right will entitle any holder who owns less than 15% of our common stock to buy one one-hundredth share of the Series A Junior Participating Preferred Stock at an exercise price of $150. Each one one-hundredth share of the Series A Junior Participating Preferred Stock is essentially equivalent to one share of our common stock. If an acquiring party accumulates at least 15% of our common stock, each right entitles any holder who owns less than 15% of our common stock to purchase for $150 either $300 worth of our common stock or $300 worth of the 15% acquiror's common stock. In November 2000, the Plan was amended to increase the threshold from 15% to 20% for Kopp Investment Advisors, Inc. and related parties. The rights expire in September 2007 and may be redeemed by us at a price of $.01 per right at any time up to ten days after they become exercisable.

Note 10. Employee Benefit Plans

Stock Option Plans

We have three stock option plans, the 1991, 1992, and 1995 Stock Option Plans, under which a total of 3,901,666 shares of common stock have been reserved. The 1995 Stock Option Plan, which incorporates the two predecessor plans, provides for the granting of both incentive stock options and nonqualified stock options to our employees, officers, directors, and consultants. In addition, the plan allows us to issue shares of common stock directly either through the immediate purchase of shares or as a bonus tied to either an individual's performance or our attainment of prescribed milestones. Incentive stock options may not be granted at an exercise price less than the fair market value on the date of grant. In addition, the plan includes stock appreciation rights to be granted at our discretion. The stock options are exercisable over a period, which may not exceed ten years from the date of grant, determined by our board of directors. A summary of the status of our stock option plans as of December 31, 1999, 2000, 2001, and changes during each of the years then ended, is presented below:

	1999		2000		2001	
	Number Outstanding	Weighted Average Exercise Price Per Share	Number Outstanding	Weighted Average Exercise Price Per Share	Number Outstanding	Weighted Average Exercise Price Per Share
Balance as of January 1	1,785,489	$ 12.15	2,152,037	$ 12.41	**2,506,901**	**$ 16.61**
Granted	443,626	13.22	616,140	28.94	**789,035**	**32.48**
Exercised	(35,663)	7.41	(247,501)	11.06	**(79,055)**	**11.28**
Canceled	(41,415)	14.15	(13,775)	12.89	**(104,625)**	**27.98**
Balance as of December 31	2,152,037	$ 12.41	2,506,901	$ 16.61	**3,112,256**	**$ 20.39**
Options exercisable as of December 31	1,242,583	$ 11.07	1,412,499	$ 12.29	**1,782,271**	**$ 14.86**

The following table summarizes information about stock options outstanding as of December 31, 2001:

	Options Outstanding			Options Exercisable	
Range of Exercise Prices	Number Outstanding	Weighted-Average Remaining Life (Years)	Weighted-Average Exercise Price	Number Exercisable	Weighted-Average Exercise Price
$ 0.90 - $12.54	**658,103**	**4.2**	**$ 8.04**	**586,343**	**$ 7.79**
$ 12.69 - $19.00	**1,110,480**	**6.2**	**14.82**	**938,005**	**15.03**
$ 19.44 - $29.00	**878,173**	**9.2**	**28.00**	**158,923**	**26.99**
$ 30.00 - $41.13	**465,500**	**9.4**	**36.78**	**99,000**	**35.63**
	3,112,256	**7.1**	**$ 20.39**	**1,782,271**	**$ 14.86**

Fair Value Disclosures

We have elected to adopt the disclosure provisions only of Statement of Financial Accounting Standards No. 123, "Accounting for Stock-Based Compensation," or SFAS 123. Accordingly, we apply APB Opinion No. 25, "Accounting for Stock Issued to Employees," and related interpretations in accounting for our stock-based compensation plans. We record deferred compensation for option grants to employees for the amount, if any, the market price per share exceeds the exercise price per share. In addition, we record deferred compensation for option grants to non-employees in the amount of the fair value per share, as computed using the Black-Scholes option-pricing model and variable plan accounting. We amortize deferred compensation amounts over the vesting periods of each option. We recognized compensation expense of approximately $0.5 million, $1.1 million, and $1.4 million for the years ended December 31, 1999, 2000, and 2001, respectively.

If we had elected to record compensation cost for our stock-based compensation plans consistent with SFAS 123, our net loss and basic and diluted net loss per share would have been increased to the pro forma amounts indicated below (in thousands, except per share data):

Year Ended December 31,	1999	2000	2001
Net loss – as reported	$ (13,318)	$ (8,500)	**$ (13,329)**
Net loss – pro forma	$ (15,853)	$ (12,182)	**$ (21,383)**
Basic and diluted net loss per share – as reported	$ (1.25)	$ (0.63)	**$ (0.95)**
Basic and diluted net loss per share – pro forma	$ (1.48)	$ (0.91)	**$ (1.52)**

The fair value of each option grant was estimated on the date of grant using the Black-Scholes option-pricing model. We used the following weighted-average assumptions for 1999, 2000, and 2001 grants, respectively: risk-free interest rate of 5.9%, 4.7%, and 4.9%; expected life of 5.2, 4.3, and 6.1 years; volatility of 60%, 75%, and 75%; and a dividend yield of zero. The weighted-average fair value of employee purchase rights granted under our employee stock purchase plan (see below) in 1999, 2000, and 2001 was $6.25, $8.45, and $11.60, respectively. The fair value of the purchase rights was estimated using the Black-Scholes model with the following weighted-average assumptions for 1999, 2000, and 2001, respectively: risk-free interest rate of 6.5%, 5.0%, and 4.6%; expected life of eighteen, fourteen, and sixteen months; volatility of 60%, 70%, and 75%; and a dividend yield of zero.

A summary of options granted at exercise prices equal to, greater than, and less than the market price on the date of grant is presented below:

Year Ended December 31,	1999	2000	2001
Exercise Price = Market Value			
Options granted	397,366	608,900	**610,400**
Weighted-average exercise price	$ 12.17	$ 29.27	**$ 30.96**
Weighted-average fair value	$ 6.89	$ 17.56	**$ 21.29**
Exercise Price > Market Value			
Options granted	40,000	—	—
Weighted-average exercise price	$ 25.00	$ —	$ —
Weighted-average fair value	$ 5.50	$ —	$ —
Exercise Price < Market Value			
Options granted	6,260	7,240	**178,635**
Weighted-average exercise price	$ 4.75	$ 4.83	**$ 37.67**
Weighted-average fair value	$ 11.01	$ 11.54	**$ 26.85**

Employee Stock Purchase Plan

We maintain an employee stock purchase plan, or ESPP, for which 100,000 shares are reserved for issuance. The ESPP allows any eligible employee the opportunity to purchase shares of our common stock through payroll deductions. The ESPP provides for successive, two-year offering periods, each of which contains four semiannual purchase periods. The purchase price at the end of each purchase period is 85% of the lower of the market price per share on the employee's entry date into the offering period or the market price per share on the purchase date. Any employee who owns less than 5% of our common stock may purchase up to the lesser of:

- 10% of his or her eligible compensation;
- 1,000 shares per purchase; or
- the number of shares per year that does not exceed the quotient of $25,000 divided by the market price per share on the employee's entry date into the offering period.

A total of 46,092, 35,102, and 17,312 shares of common stock remained available for issuance under the ESPP as of December 31, 1999, 2000, and 2001, respectively. The total purchases of common stock under the ESPP during the years ended December 31, 1999, 2000, and 2001, were 15,540 shares at a total purchase price of approximately $0.2 million, 10,990 shares at a total purchase price of approximately $0.2 million, and 17,790 shares at a total purchase price of approximately $0.3 million, respectively. We have not recorded any compensation expense for the ESPP.

Note 11. Commitments

Leases

In 1999, we entered into a two-year lease agreement for laboratory and office space in California. This lease expired in September 2001. In April 2001, we entered into a new lease agreement for approximately 10,000 square feet of laboratory and office space in California. The initial term of the lease ends in March 2006, at which time we have an option to extend the lease for an additional five years. In July 2001, we entered into a lease agreement for approximately 5,000 square feet of office and warehouse space in Pennsylvania. The lease term expires in December 2004. Our rental expense for the years ended December 31, 1999, 2000, and 2001 was approximately $19,000, $77,000, and $322,000, respectively. Minimum future annual payments under our operating lease agreements as of December 31, 2001 were as follows (in thousands): 2002—$345; 2003—$349; 2004—$363; 2005—$328; and 2006—$83.

Construction Contract

In October 2001, we entered into an agreement with a construction firm to renovate and expand our facility in Horsham, Pennsylvania at an expected total cost of approximately $17 million, of which approximately $8.2 million was capitalized as construction-in-progress as of December 31, 2001.

License Agreements

We have entered into agreements with various entities under which we have been granted licenses to use patent rights and technology. Typically, these agreements will terminate upon the expiration of the applicable patent rights, and require us to reimburse the licensor for fees related to the acquisition and maintenance of the patents licensed to us. In addition, we usually are required to pay royalties to the licensor based either on sales of applicable products by us or specified license fees, milestone fees, and royalties received by us from sublicensees, or both.

Employment Agreements

In January 2002, we entered into a retirement agreement with our Vice President, Research. Under this agreement, he will terminate his employment effective June 30, 2002. We have committed to pay a retirement benefit over a five-year period. We will record approximately $0.5 million, which is the present value of the retirement benefit, as compensation expense in 2002. In addition, we have extended the period during which he may exercise his stock options after terminating his employment, and will record non-cash compensation expense of approximately $1.7 million in 2002 associated with this option modification.

In January 2002, we entered into retention agreements with certain employees. Under these agreements, we have committed to pay severance equal to one year's salary in the event of the involuntary termination of, or the resignation with good reason by, the covered employees. In certain circumstances, the employees' stock options would continue to vest and be exercisable for one year following termination.

Note 12. Income Taxes

As of December 31, 2001, we had net operating loss carryforwards for federal and state income tax purposes of approximately $9.6 million and $6.3 million, respectively. In addition, we had federal research and development credit carryforwards of approximately $2.7 million. All of these carryforwards begin to expire in 2004. Due to the uncertainty surrounding the realization of the tax benefit associated with these carryforwards, we have provided a full valuation allowance against this tax benefit. In addition, pursuant to the Tax Reform Act of 1986, the annual utilization of our net operating loss carryforwards will be limited. We do not believe that these limitations will have a material adverse impact on the utilization of our net operating loss carryforwards. The approximate income tax effect of each type of temporary difference and carryforward is as follows (in thousands):

December 31,	2000	2001
Benefit of net operating loss carryforwards	$ 1,621	$ 1,141
Research and development credit carryforwards	2,129	2,686
Capitalized research and development	11,890	14,532
Start-up costs	9,411	11,906
Nondeductible depreciation and amortization	3,242	3,485
Deferred compensation	905	1,494
Accrued expenses not currently deductible	209	147
Deferred revenue	124	56
Other	4	35
	29,535	35,482
Valuation allowance	(29,535)	(35,482)
	$ —	$ —

Note 13. Related-Party Transactions

Paramount Capital, Inc., of which the sole shareholder is a member of our Board of Directors, acted as a finder for our private placement of common stock in June 1999 (see Note 9). We paid Paramount Capital approximately $0.8 million for its assistance in completing the private placement. Entities affiliated with Paramount Capital purchased 110,000 shares of common stock in the private placement.

In 1997, we entered into a consulting agreement with an employee of Paramount Capital. Under the agreement, which may be terminated by either party upon sixty days prior notice, we are obligated to pay the consultant an annual amount of $50,000, which was paid in each of the years ended December 31, 1999, 2000 and 2001. During 1999, we granted the consultant an option to purchase 30,000 shares of common stock at an exercise price of $10.38, the market price on the date of grant. The option vests in equal, annual amounts in 2002 and 2003. In connection with this option grant, we have recorded non-cash compensation expense of approximately $0.1 million, $0.3 million, and $0.3 million for each of the years ended December 31, 1999, 2000, and 2001, respectively.

Our common stock is listed on the Nasdaq National Market under the symbol NTEC. We commenced trading on the Nasdaq National Market on February 15, 1996.

As of March 25, 2002, there were approximately 200 record holders and 4,500 beneficial holders of our common stock. We have never declared or paid any cash dividends on our common stock. We intend to retain any future earnings to fund the development and growth of our business. Therefore, we do not anticipate paying any cash dividends in the foreseeable future. Any future determination to pay dividends will be at the discretion of our board of directors. The following table sets forth the high and low closing sale prices of our common stock for the periods indicated.

Common Stock Price

Year Ended December 31, 2000	High	Low
First Quarter	$ 60.13	$ 13.00
Second Quarter	45.94	18.63
Third Quarter	51.82	33.00
Fourth Quarter	52.00	25.75
Year Ended December 31, 2001		
First Quarter	**44.38**	**22.38**
Second Quarter	**46.97**	**23.25**
Third Quarter	**47.42**	**30.15**
Fourth Quarter	**41.81**	**27.31**

General Counsel

Pepper Hamilton LLP
3000 Two Logan Square
Eighteenth and Arch Streets
Philadelphia, PA 19103

Independent Accountants

Arthur Andersen LLP
1601 Market Street
Philadelphia, PA 19103

Transfer Agent and Registrar

American Stock Transfer & Trust Company
40 Wall Street
New York, NY 10005
Telephone: (212) 936-5100

Annual Meeting

The annual meeting of our stockholders will be held at 1:00 p.m. on June 25, 2002, at our offices.

Corporate Headquarters

102 Witmer Road
Horsham, PA 19044
Telephone: (215) 315-9000
Fax: (215) 315-9100

Website

www.neose.com

SEC Form 10-K and Investor Relations Information

If you have lost your stock certificates or have any questions about stock transfers, please contact American Stock Transfer & Trust Company at (212) 936-5100. You may obtain general information about us, including our Annual Report on Form 10-K, by writing to:

Investor Relations Department
Neose Technologies, Inc.
102 Witmer Road
Horsham, PA 19044

Directors and Officers

Officers

C. Boyd Clarke
President and Chief Executive Officer

David A. Zopf, M.D.
Executive Vice President

A. Brian Davis
Acting Chief Financial Officer

Edward J. McGuire, Ph.D.
Vice President, Research and Development

W. Kevin Pelin
Vice President, Manufacturing Operations

Debra J. Poul
General Counsel and Secretary

George J. Vergis, Ph.D.
Vice President, Business and Commercial Development

Board of Directors

Stephen A. Roth, Ph.D.
Chairman of the Board

C. Boyd Clarke
President and Chief Executive Officer
Neose Technologies, Inc.

William F. Hamilton, Ph.D.
The Wharton School
University of Pennsylvania

Douglas J. MacMaster, Jr.
Former Senior Vice President
Merck & Co., Inc.

P. Sherrill Neff
Managing Partner
Quaker BioVentures, L.P.

Mark H. Rachesky, M.D.
President
MHR Fund Management LLC

Lindsay A. Rosenwald, M.D.
Chairman and CEO
Paramount Capital, Inc.
Paramount Capital Investments, LLC
Paramount Capital Asset Management, Inc.

Lowell E. Sears
Chairman and Chief Executive Officer
Sears Capital Management

Jerry A. Weisbach, Ph.D.
Former President
Pharmaceutical Research Division
Warner-Lambert Company

Scientific Advisors

Henrik Clausen, DDS, DSC[*†]
Associate Professor, School of Dentistry
Faculty of Health Sciences
University of Copenhagen

David C. James, Ph.D.[†]
Associate Professor of Bioengineering
Department of Chemical Engineering
University of Queensland

Howard L. Levine, Ph.D.[†]
President
Bioprocess Technology Consultants

James C. Paulson, Ph.D.[*†]
Professor, Department of Molecular Biology
and Molecular Experimental Medicine
The Scripps Research Institute

John F. Robyt, Ph.D.[*]
Professor of Biochemistry
Director of the Laboratory of
Carbohydrate Chemistry and Enzymology
Iowa State University

Harry Schachter, M.D., Ph.D., FRSC[*†]
Emeritus Scientist
The Hospital for Sick Children
University of Toronto

Barry D. Shur, Ph.D.[*]
Professor and Chairman
Department of Anatomy and Cell Biology
Emory University School of Medicine

Pamela Stanley[†]
Department of Cell Biology
Albert Einstein College of Medicine

George Whitesides, Ph.D.[*]
Mallinckrodt Professor of Chemistry
Harvard University

* Member of Scientific Advisory Board

† Member of GlycoAdvance Advisory Board

Design: The Graphic Expression, Inc., NYC; www.tgenyc.com

NEOSE

Neose Technologies, Inc.
102 Witmer Road
Horsham, PA 19044
www.neose.com