

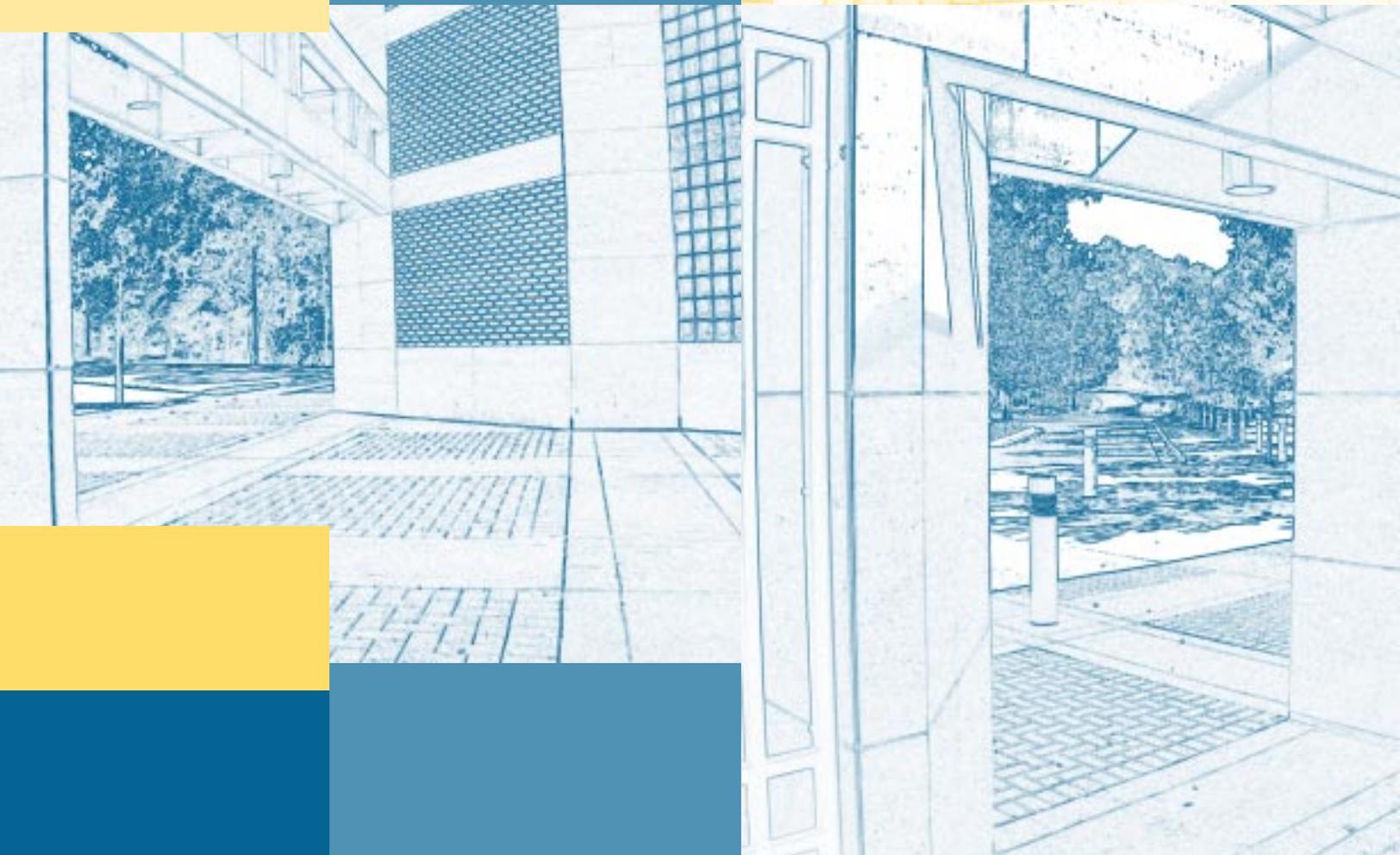
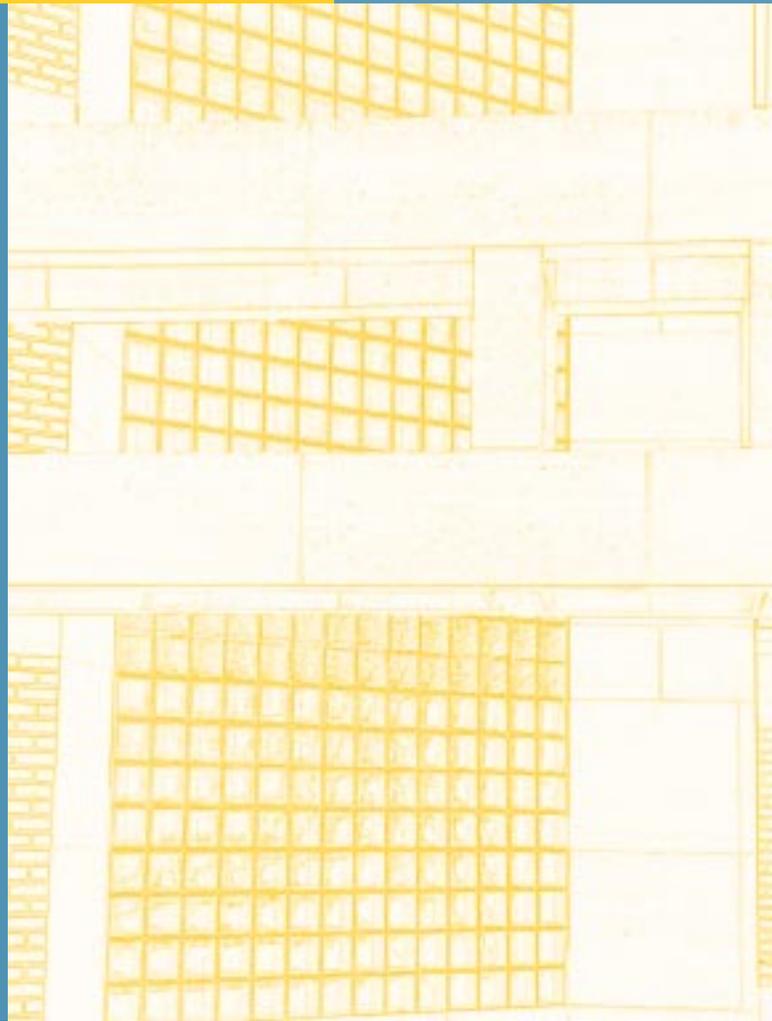
The North Carolina Biotechnology Center

2000 Annual Report



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THE NORTH CAROLINA BIOTECHNOLOGY CENTER

Moving biotechnology from mind to market

When scientists conducted the first genetic engineering experiments in the 1970s, leaders in North Carolina paid attention. They realized that a potent new technology was emerging that could bring substantial economic and societal benefits. Wanting North Carolina to be at the forefront of this new industry, the State in 1981 created an organization to stimulate the development of biotechnology: the North Carolina Biotechnology Center, the nation's first state-sponsored biotechnology initiative.

Initially a part of state government, the Center was reconstituted in 1984 as a private, non-profit corporation, giving it greater flexibility. As a neutral, non-partisan organization, the Center is well positioned to catalyze interactions among industry, academia and government for technological development. Working with these groups, the Center is active at all points in the movement of biotechnology from the laboratory to the market.

The Center's mission is to provide long-term economic benefit to North Carolina through support of biotechnology research, development and commercialization statewide. A 48-member staff works toward five goals:

- strengthen North Carolina's research capabilities in its academic and industrial institutions
- foster North Carolina's industrial development
- inform and educate the public about biotechnology
- develop mutually beneficial partnerships among all parties involved in moving biotechnology from research to commercialization
- establish for North Carolina a leadership role in biotechnology and its commercialization.

Unlike many biotechnology initiatives in other states, the Center does not conduct laboratory research. Instead, it works to strengthen the research capabilities of North Carolina's companies and universities. This strategy avoids duplication of effort and uses limited resources more efficiently.

The Center is funded mainly by the North Carolina General Assembly, which appropriated \$10 million for Center programs and activities in the 2000 fiscal year.

The Center is located in an award-winning 40,000-square-foot headquarters building at 15 T.W. Alexander Drive in Research Triangle Park.

BIOTECHNOLOGY AT WORK

New products for a better quality of life

Company and university researchers throughout North Carolina are using biotechnology to develop more nutritious foods, new drugs and diagnostics, more productive livestock, harder crop plants, better ways to detect and clean up pollution, improved household products, and more efficient industrial processes. These innovations are improving our daily lives and our economy.

Look around North Carolina, and you'll see biotechnology at work. A multiple sclerosis patient in Boone takes a genetically engineered drug to slow the progression of her disability. In Greenville, a farmer plants engineered cotton that helps him control weeds. In Charlotte a homemaker uses laundry detergent that contains stain-cutting enzymes produced by genetically engineered microbes. In Winston-Salem a hospital patient's blood is monitored with a diagnostic system to determine how well his heart medicine is working. In Wilmington, a cargo ship uses a bacterial bioreactor to clean its contaminated bilge water. And in Raleigh, a community college graduate lands a high-paying job with a new biomanufacturing plant.

What is this powerful new technology that brings us these benefits? Contrary to its name, biotechnology is not a single technology but a collection of new technologies bound by a common thread: they all use living cells and the molecules within them to make new products, improve existing products, and solve problems. Major techniques of biotechnology include genetic engineering, monoclonal antibody technology, bioprocessing, and cell and tissue culture. Using these and other technologies drawn from genetics, immunology, biochemistry, microbiology, molecular biology and other life sciences, researchers are able to improve the health, traits and products of organisms for our benefit.

BIOTECHNOLOGY

Why it's important to North Carolina

North Carolina is well suited to gain from biotechnology. Its traditional industries — especially agriculture, food and medicine — are the very ones that biotechnology can most enhance. North Carolina also has the necessary resources to develop biotechnology, including a tradition of technological development, two large research parks, leading research universities, four medical schools, major federal research labs, a progressive business climate, long-term governmental support, an extensive community college system, a highly trained work force, abundant natural resources and the nation's first state-sponsored biotechnology center.

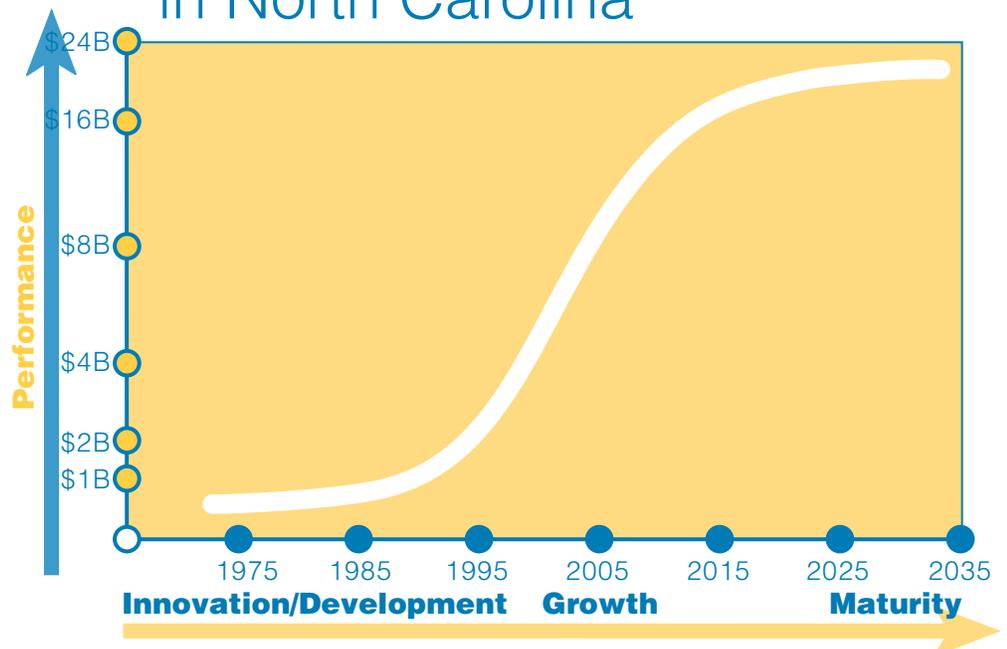
North Carolina is home to the South's largest and most dynamic biotechnology industry and is among the country's top ten biotechnology states. More than 120 companies work in biotechnology and related biosciences, about 65 companies provide contract research and testing ser-

vices to the industry, and another 150-plus companies provide goods and services to these companies. North Carolina's biotechnology industry employs about 20,000 people, representing a payroll of more than \$800 million, and generates annual product sales of about \$1.8 billion.

Even greater returns await us. As the industry matures, it is moving from a

research-and-development enterprise to a product-manufacturing endeavor. This transition is yielding beneficial new products and generating thousands of new jobs. Within the next 20 years, biotechnology and related bioscience technologies are projected to generate \$20 billion in annual product sales and employ 100,000 people in North Carolina.

Projected Biotechnology Growth in North Carolina



Message from the President and Chairwoman

An organization like ours has to have sound programs that build and serve its client community. Once the foundational programs are in place, it is essential that the organization's management keep the community at the leading edge of technology development and emerging issues. Early on, the North Carolina Biotechnology Center established programs that were crucial to economic growth through biotechnology. The programs were designed to:

- strengthen university research and technology transfer
- assist capital formation and infrastructure development for business and industry
- prepare an educated workforce
- improve public awareness of biotechnology
- pay attention to the future and its rapid technological changes.

With the help of an outstanding Board, a number of expert Advisory Committees and a dedicated staff, the Center in recent years has anticipated key needs and opportunities for the continued growth of the biotechnology industry. The Center has addressed these needs and opportunities through such endeavors as the Genetically Engineered Organisms Act, recruitment of commercial bioprocess manufacturing companies, the Advisory Committee on Development and Transfer of Biotechnology, Biovision 2000, the Historically Minority Universities Biotechnology Program Initiative and the North Carolina Bioscience Investment Fund.

This year the Center focused on a new frontier: forest biotechnology. Forestry is a major industry in North Carolina, employing more than

140,000 people, mostly in the rural areas of our state. Through the excellent leadership of the Center's Steven Burke and the Advisory Committee on Forest Biotechnology, an Institute for Forest Biotechnology was conceptualized. This national, non-profit institute, to be headquartered in North Carolina, will ensure effective and responsible application of biotechnology to forestry, which will yield enormous ecological, societal, and economic benefits in years to come.

The next major technology opportunity will come from genomics and bioinformatics. Genomics is a rapidly growing field that discovers the function of genes, and bioinformatics is the management of that genomics data. These new technologies will revolutionize agriculture through value-added crops and greatly enhance the chemical, pharmaceutical and environmental industries. Our overall quality of life will continue to improve through better health, more nutritious food and a cleaner environment.

To prepare for this great opportunity, the Center is beginning to form a public/private partnership called the North Carolina Genomics and Bioinformatics Consortium. Compa-



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nies, research universities, foundations, and support organizations will share information and resources, form alliances and establish programs to ensure that North Carolina is a major

player in the worldwide genomics and bioinformatics industry.

Driven by genomics and other emerging technologies, biotechnology will become the dominant technology of the 21st century, bringing enormous economic returns over the next 25-plus years. North Carolina's ability to compete globally in biotechnology will largely depend on continued State investment in the Center's programs.

The North Carolina General Assembly supports the Center on a bipartisan basis with an annual appropriation of \$9.5 million, representing about 75 percent of the Center's total operating budget. The Center has been able to leverage State funds more than 15 to 1 and help establish a rigorous industry of 120 bioscience companies supported by 65 clinical research organizations and 150 equipment and supply/support companies. With sustained State investment, the future is bright for North Carolina to be in the top five states for biotechnology.

Charles E. Hamner, DVM, PhD
*President and Chief Executive Officer
North Carolina Biotechnology Center*

Enriqueta C. Bond, PhD
*President
The Burroughs Wellcome Fund*

Accomplishments IN 2000

Growing biotechnology from the ground up

The development of biotechnology is a complex and long-term process that begins with ideas and research and ends with commercial products that improve our lives and boost our economy. The Center assists this movement at all points. Its programs, activities and partnerships strengthen biotechnology research, business and education throughout the state and address the many issues and opportunities presented by biotechnology.

Following are highlights of the Center's accomplishments in 2000.

Science and Technology Development

The Science and Technology Development Program strengthens the biotechnology research capabilities of North Carolina's universities through grants, intellectual exchange programs and databases of research facilities and faculty. This year, the Program:

- awarded ten grants totaling \$1,150,000 to help North Carolina universities recruit two outstanding faculty and acquire multi-user research facilities and equipment. These awards, made through the Institutional Development Grants Program, are listed on page 13.
- awarded 21 university grants totaling \$1,106,762 to initiate innovative research projects with commercial potential. These awards, made through the Academic Research Initiation Grants Program, are listed on page 14.
- awarded \$389,250 to support research collaborations between nine biotechnology-related companies and five universities and medical centers. The funding was provided by the Collaborative Funding Assistance Program, cosponsored by the Kenan Institute for Engineering, Technology and Science. These awards are listed on page 13.
- awarded two grants totaling \$499,288 for multidisciplinary research at North Carolina State University. These awards, made through the Multi-Disciplinary Research Grants Program, are listed on page 14.
- supported conferences, symposia and workshops on the scientific aspects of biotechnology. These awards, made through the Biotechnology Event Sponsorships Program, are listed on page 16.
- supported five intellectual-exchange organizations: the North Carolina Plant Molecular Biology Consortium, the North Carolina RNA Society, the Triangle Virology Association, the Smaller Eukaryotes Group, and the North Carolina Tissue Engineering Group.



Business and Technology Development

The Business and Technology Development Program helps biotechnology companies with financing, technology assessment, technology transfer, business plans, networking opportunities, venture capital placements, marketing strategies, strategic partnerships, site locations and professional referrals.

This year, the Program:

- provided loans totaling \$200,000 to two young biotechnology companies for product research and development. These awards, provided through the Small Business Research Award Program, are listed on page 12.
- awarded loans totaling \$50,000 to help five young biotechnology companies with their business-development activities, including business plans, market research, product regulatory submissions, and product testing. These loans, provided through the Business Development Award Program, are listed on page 12.
- cosponsored Biotech 2000, the annual meeting of the state's biotechnology industry, which attracted more than 600 people for a day of networking, exhibits and presentations.



BIOTECH 2000

More than 600 people attended Biotech 2000, a day of presentations, exhibits and networking for the state's biotechnology community. The eighth annual meeting, held in Chapel Hill on May 31, 2000, was organized by the Biotechnology Center and the Council for Entrepreneurial Development. In the photos above, the Center's Paul Wood (left) networks with an attendee; and entrepreneurs Jim Skinner, Bruce Oberhardt, and Max Wallace talk shop (right).



Jan Turek of Bayer Corp. gives the keynote address.



Tracey O'Neal of IBAH Pharmaceuticals Services enjoys a snack with Vance Caudill of O'Neal Inc.

Neil Coles, left, of Fresenius Kabi Clayton R&D Inc. speaks with Damu Murray of Vizitek Inc.



IMPROVING FORESTRY THROUGH BIOTECHNOLOGY

Every year the average American uses enough paper and wood products to equal a 100-foot tall tree 16 inches in diameter, and consumption is growing. But so are pressures to preserve trees and reduce logging on public lands. These conflicting demands are squeezing an industry that already faces growing competition abroad.

Forestry executives throughout the United States believe biotechnology will be an important tool for meeting their industry's challenges in the 21st century. Biotechnology can help grow more wood on less land, produce hardier trees with better traits, help reclaim polluted lands and preserve endangered species of trees.

lina lieutenant governor. "We've been able to accomplish wonderful things with soybeans and corn, but the question is how do we deal with trees? How do we do it for industry, public and economic gain? And most importantly, how do we get North Carolina out in front?"

To answer those questions, the Center created the Advisory Committee on Forest Biotechnology, chaired by Jordan and consisting of 28 forestry industry representatives, government officials and university researchers from throughout North Carolina and the nation. The committee had five monthly meetings at the Center in 1999.



Dr. Charles Hamner, president and CEO of the Center, right, discusses the Center's forest biotechnology initiative with North Carolina Governor Jim Hunt at a briefing in October 1999. "This is the right thing to do, this is the smart thing to do, and I want to see us do it," Hunt said.

This "is the time to merge trees and biotechnology in ways we haven't done before."

— Bob Jordan, president of Jordan Lumber

This "is the time to merge trees and biotechnology in ways we haven't done before," said Robert B. Jordan III, president of Jordan Lumber and former North Caro-

lina lieutenant governor. One of its recommendations was to create a national, non-profit Institute of Forest Biotechnology to accelerate the use of biotechnology in the forest industry and to ad-

dress the issues it will raise. A Center-sponsored task force of national forestry leaders began planning the Institute and searching for its leader in 2000. The Institute will be headquartered in North Carolina.

forest technology and forest products for Champion International Corp.

The forestry industry employs 140,000 people in North Carolina and produces about 6.3 percent of the state's manufacturing revenue.

"North Carolina is an especially suitable place for forest biotechnology," said Dr. Ron Sederoff, a committee member and professor of forestry at North Carolina State University. "It is strong in forestry research and strong in biotechnology. We think we can use the strengths to strengthen and protect our forest resources and to produce economic gain."

"This is the right thing to do, this is the smart thing to do, and I want to see us do it."

— North Carolina Governor Jim Hunt

- awarded five grants totaling \$5,350 to support biotechnology business events including the Sixteenth Annual Conference on Entrepreneurship, the Venture 2000 venture capital conference, and the Southeastern BIO Investor Forum. These grants, provided through the Biotechnology Event Sponsorships Program, are listed on page 16.
- cosponsored the Biotechnology Roundtable, a monthly gathering of biotechnology executives who network and hear presentations.
- provided dozens of biotechnology companies and entrepreneurs with professional referrals, technical and business advice, relocation assistance, technology transfer expertise and other assistance.

Education and Training

The Education and Training Program promotes public understanding of biotechnology and work force preparedness through teacher training, teaching materials, grants programs, needs assessments and other activities at all educational levels throughout North Carolina. This year, the Program:

- partnered with the state's Community College System and Novo Nordisk Biochem to develop a 96-hour bioprocess operator's course that will prepare workers for entry level jobs in biomanufacturing plants.

FOOD FOR THOUGHT

Center gives consumers information on food biotechnology

As more biotechnology-derived foods find their way into supermarkets and restaurants, consumers need to know more about what they're eating. To help inform consumers about these foods, the Center in 2000 produced a brochure on the topic and sponsored an exhibit at the North Carolina State Fair.

The four-page brochure, *Considering the Nature and Issues of Food Biotechnology*, describes how biotech foods are produced, who they benefit, how they are regulated, and how they differ from conventional foods. It also addresses common questions about food safety and the environmental impact of biotech food crops.

The brochure is free and available to the public and is also posted on the Center's Web site at www.ncbiotech.org/aboutbt/foodbt.cfm.

The Center's State Fair exhibit provided information on the products and issues of agricultural biotechnology. Center staff and volunteers from the state's biotechnology community answered questions and distributed literature to hundreds of fair-goers during the 10-day event.



Curious fair-goers watch the Biotechnology Center's Randy Handwork, right, spool DNA at the 1999 North Carolina State Fair. The Center sponsors an exhibit at the Fair each year to inform people about the science, products and issues of biotechnology, especially food and agricultural biotechnology.

VENTURE CAPITAL FINDS NORTH CAROLINA'S BIOTECHNOLOGY COMPANIES

The promise of North Carolina's biotechnology industry captured the attention of the investment community in 2000. Venture capitalists and other investors both inside and outside the state poured more than \$200 million into nearly 30 North Carolina biotechnology start-up companies between July 1999 and June 2000, and two other companies raised \$120 million in initial public offerings of stock.

The North Carolina Biotechnology Center played a major role in providing early stage capital for the industry. Through its loan programs, it supported two companies with

\$200,000 for research and development work. It also invested \$850,000 in new venture capital funds launched by Intersouth Partners and Aurora Funds Inc., both of Durham. In addition, the North Carolina Bioscience Investment Fund, a \$28.5 million venture fund created by the Center to finance early stage life science companies in the state, finished its first full year of investing. The Fund, professionally managed by Eno River Capital LLC of Durham, concluded the year with eight company investments totaling \$9.2 million.

"With approximately one year of full-time investing activity behind us, we are pleased at the development of the portfolio," said Paul A. Jones, a managing member of Eno River.

Raised from a variety of public and private sources, including the state's General Assembly, the Fund provides \$500,000 to \$2 million in seed funding to promising bioscience start-up companies, which typically have difficulty raising early stage money.

The North Carolina Biotechnology Center played a major role in providing early stage capital for the industry.

- awarded six grants totaling \$192,945 to strengthen biotechnology education and training programs at three universities, two colleges and one community college. These awards, made through the Education Enhancement Grants Program, are listed on page 15.
- awarded six grants totaling \$26,441 to help four high schools integrate biotechnology lessons and labs into the biology curriculum. These awards, made through the Biotechnology Education Mini-Grants Program, are listed on page 15.
- sponsored sabbaticals for three university faculty to spend the summer working and learning at three commercial biomanufacturing plants so they are better able to teach their students. These awards are listed on page 16.
- sponsored five summer workshops to prepare 66 middle school, high school and community college teachers to teach about the science, applications and issues of biotechnology.



North Carolina Bioscience Investment Fund deals			
COMPANY	LOCATION	INDUSTRY	INVESTMENT
AmpliStar	Winston-Salem	Cancer screening tests	\$2.6M
Bloodhound Software	Durham	Health claims processing	\$1.5M
Blue292 Inc.	Durham	E-commerce/environmental testing services and products	\$2M
Cell Analytics	Raleigh	Cell biology research instrumentation	\$1.8M
Cogent Neuroscience Inc.	Durham	Genomics	\$500,000
Encelle Inc.	Greenville	Wound healing, bioartificial pancreas	\$500,000
Alternative Control Technologies Inc.	Charlotte	Passive insect control technology	\$211,000
Point Diagnostics Inc.	Winston-Salem	Automation of radiology reporting	\$60,000



Historically Minority Universities Biotechnology Program Initiative

With special appropriations from the state's General Assembly, the Center has worked since 1993 to strengthen the biotechnology teaching and training programs of North Carolina's six public, historically minority universities: Elizabeth City State University, Fayetteville State University, North Carolina A&T State University, North Carolina Central University, Winston-Salem State University, and the University of North Carolina at Pembroke. Enrollment in bioscience courses at these universities has more than tripled since then, with more than 3,000 students now taking courses in the life sciences.

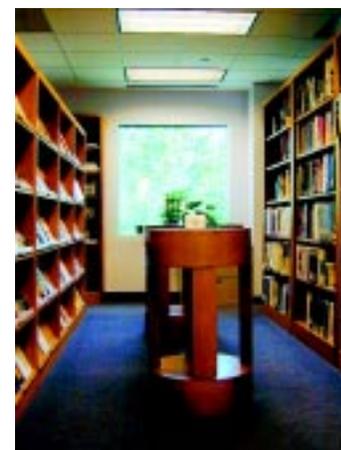
This year the Center awarded grants totaling \$946,500 to help the universities further strengthen their biotechnology programs. The grants are listed on page 16.

Conference and Education Facility

The Center's 19,000-square-foot Conference and Education Facility is a local, state and national hub for meetings on the science, business and issues of biotechnology. It also serves clients from outside the biotechnology community. This year the Facility provided space, catered meals, audiovisual support and videoconferencing for 25,000 visitors at 1,600 meetings.

Library

The Center's full-service library provides people in business, academia and government with the latest information on commercial biotechnology. This year the library responded to 1,424 requests for business information and statistical data about commercial biotechnology. Library staff worked on 90 research projects during the year, arranged 55 interlibrary loans and provided educational videotapes on biotechnology to 69 North Carolina teachers for use in the classroom. About 400 visitors did their own research in the library.



Grants and Loans Awarded IN 2000

The North Carolina Biotechnology Center awarded 103 grants and loans totaling \$4.6 million to universities, companies and other groups in the 1999–2000 fiscal year.

Small Business Research Award Program

EnSolve Biosystems Inc., Raleigh
Dr. Donald Kelemen • \$100,000 • “Development of High-efficiency Biotreatment System.”

Sicel Technologies Inc., Chapel Hill
Dr. Robert Black • \$100,000 • “Implantable Sensor for Radiation Therapy.”

Business Development Award Program

BioResource International Inc., Cary
Dr. Jason C.H. Shih • \$10,000 • “Commercial Development of Keratinase Technology.”

Centers for Innovative Care Inc., Cary
Samuel F. Yanuck • \$10,000 • “C4IC Startup Activities.”

LeukoMed Inc., Research Triangle Park
Richard M. Mueller • \$10,000 • “LeukoMed Business Development.”

Millennium Medical Technologies Inc., Charlotte
Michael A. Caracozza • \$10,000 • “Preparation of Business Development Plan and Implementation of Strategic Corporate Alliances.”

Paradigm Organics, Inc., Raleigh
Charles C. Orji • \$10,000 • “Marketing Development.”

Collaborative Funding Assistance Program

Carolinas Medical Center
In partnership with Sertoli Technologies Inc., Tucson, Arizona
Dr. Craig Reed Halberstadt, General Surgery Research • \$30,000 • “Characterization of Sertoli Cells and Islet Co-cultures and Transplants.”

Duke University Medical Center
In partnership with SkinCeuticals Inc., Durham
Dr. Sheldon R. Pinnell, Department of Medicine • \$30,000 • “Development of Topical Anti-oxidants to Prevent UV Photo-injury.”

East Carolina University
In partnership with PhytoMyco Research Corp., Greenville
Dr. Edmund J. Stellwag, Department of Biology • \$59,250 • “An ECU/PMRC Collaborative Program: Bioactive compounds from endophytic and ‘non-culturable’ microbes for pharmaceutical use.”

North Carolina State University
In partnership with Blue Ridge Pharmaceuticals, Greensboro
Dr. Janice Benson Allen, Department of Anatomy, Physiological Science and Radiology • \$30,000 • “Role of TGFbeta-2 in Corneal Non-healing Ulcers.”

North Carolina State University
In partnership with Industrial Microwave Systems Inc., Research Triangle Park
Dr. Brian E. Farkas, Department of Food Science • \$30,000 • “Lyophilization of Heat-labile Biomaterials in a Microwave Cylindrical Reactor.”

North Carolina State University
In partnership with Novo Nordisk Biochem, NA, Franklinton
Dr. Harold S. Freeman, College of Textiles • \$30,000 • “Enzyme-assisted Dyeing: Reactions, Mechanisms and Structures.”

North Carolina State University
In partnership with Insect Biotechnology Inc., Durham
Dr. Russell J. Linderman, Department of Chemistry • \$60,000 • “Non-peptide Analogs of Trypsin Modulating Oostatic Factor.”

North Carolina State University
In partnership with Biolex Inc., Pittsboro
Dr. Yuri T. Yamamoto, College of Forestry • \$60,000 • “Duckweed Protein Expression Library System: Its Development and Application for Gene Cloning.”

University of North Carolina at Chapel Hill
In partnership with Cato Research Ltd., Durham
Dr. John J. Lemasters, Department of Cell Biology and Anatomy • \$60,000 • “Development of Carolina Rinse Solution.”

Institutional Development Grants Program

Duke University
Dr. Fan Yuan, Department of Biomedical Engineering • \$125,000 • “Laser Scanning Confocal Microscopy for Biotechnology Research.”

East Carolina University
Dr. Arthur Palfrey Bode, Department of Pathology and Laboratory Medicine • \$200,000 • “First Core Unit in Confocal Microscopy for East Carolina University.”

North Carolina State University
Dr. David M. O’Malley, Department of Forestry • \$49,237 • “Enhancing DNA Marker Technology at N.C. State University.”

Dr. Bryon Sosinski, Dr. William F. Thompson, and Dr. Charles H. Opperman, College of Agriculture and Life Sciences • \$31,500 • “Instrument and Software Supplement for the Genome Research Laboratory, a Multi-user Core Genomics Facility at N.C. State University.”

University of North Carolina at Chapel Hill
Dr. Larry W. Arnold, Department of Microbiology and Immunology • \$143,765 • “Laser Scanning Cytometry at UNC-CH.”

Dr. Dwight Bellinger and Dr. Virginia Godfrey, Department of Pathology and Laboratory Medicine • \$75,848 • “UNC Animal Models Imaging Core.”

Dr. William F. Marzluff, Department of Biochemistry and Biophysics • \$132,550 • “UNC Genomics Core: High-throughput Genotyping and Expression Array Analysis.”

Dr. William F. Marzluff, Department of Biochemistry and Biophysics • 200,000 • “Exceptional Faculty Recruitment of Dr. Terry Magnuson, Genomics Center Director.”

Dr. Terry Van Dyke, Department of Biochemistry and Biophysics • \$96,100 • “Development of Genotyping and Cryopreservation Capacities in the UNC Animal Models Core Facility.”

University of North Carolina at Charlotte

Dr. Arthur Greenberg, Department of Chemistry • \$96,000 • “Recruitment of Dr. Kenneth Gonsalves.”

Multi-Disciplinary Research Grants Program

North Carolina State University

Dr. Hou-min Chang, Department of Wood and Paper Science • \$249,387 • “Exploiting Genetic Variation of Fiber Components and Morphology in Juvenile Loblolly Pine.”

Dr. Robert M. Kolbas, Department of Electrical and Computer Engineering • \$249,901 • “Intracellular Engineering.”

Academic Research Initiation Grants Program

Duke University

Dr. Michael C. Fitzgerald, Department of Chemistry • \$55,000 • “A Combinatorial Assay for Protease Specificity.”

Dr. Mark W. Grinstaff, Department of Chemistry • \$55,000 • “Carbohydrosomes.”

Dr. Jie Liu, Department of Chemistry • \$55,000 • “Using Single-walled Carbon Nanotubes in Scanning Probe Microscopy/ Spectroscopy as Nanaprobes with Chemical Sensitivity.”

Dr. David Needham, Department of Mechanical Engineering and Materials Science • \$55,000 • “Triggered Release of Contents from Liposomes Using Ultrasound.”

Dr. Lori A. Setton, Department of Biomedical Engineering • \$55,000 • “Genetically Engineered Elastin-like Polypeptides for Cartilage Repair.”

Dr. Kristine L. Willett, Toxicology Program, Nicholas School of the Environment • \$53,107 • “Characterization of CYP1B1 Gene Activation in Fish for Use as a Possible Marker of Cancer Resistance.”

Duke University Medical Center

Dr. Michael Ehlers, Department of Neurobiology • \$55,000 • “Developing NMDA Receptor Inactivating Peptides as Neuroprotective Agents.”

Dr. Johannes Rudolph, Department of Biochemistry • \$55,000 • “Rapid and Quantitative Analysis of Phosphorylation Status of Specific Phospho-proteins.”

East Carolina University

Dr. Daniel W. Martin, Department of Microbiology and Immunology • \$55,000 • “Analysis of an Inducible Peptide Synthetase in *Legionella pneumophila*.”

Dr. James Andrew McCubrey, Department of Microbiology and Immunology • \$55,000 • “Isolation of Novel Genes that Synergize with BCL-2 and BCL-XL and Confer Breast Cancer Drug Resistance.”

North Carolina State University

Dr. Robert Rene Henri Anholt and Dr. Coby Schal, Department of Zoology • \$44,500 • “New Targets for Biotechnology-driven Pest Control: Identification of Cockroach Pheromone Binding Proteins.”

Dr. Linda Hanley-Bowdoin, Department of Biochemistry • \$55,000 • “An Aptamer-based Interference Strategy for Eukaryotic Single-stranded DNA Viruses.”

Dr. David E. Malarkey, Department of Microbiology, Pathology and Parasitology • \$19,155 • “Microarray Gene Expression of Liver Tumor Regression in B6C3F1 Mice.”

University of North Carolina at Chapel Hill

Dr. Ralph S. Baric and Dr. Christine Moe, Department of Epidemiology • \$55,000 • “Molecular Approach to Detect and Control Human Calicivirus Infections.”

Dr. Roy A. Hopfer and Dr. Gary M. Cox, Department of Microbiology and Immunology • \$55,000 • “Adapting Antisense Repression to *Candida Albicans*.”

Dr. Joseph Kieber, Department of Biology • \$55,000 • “Use of a Cytokinin-inducible GFP Reporter Line to Dissect the Cytokinin Response Pathway.”

Dr. David G. Klapper, Department of Microbiology and Immunology • \$55,000 • “Synthetic Gonococcal Vaccine.”

Dr. Aravinda de Silva, Department of Microbiology and Immunology • \$55,000 • “A Transmission Blocking Lyme Disease Vaccine Based on *Borrelia burgdorferi* OspA and Attenuated Venezuelan Equine Encephalitis Viral Vectors.”

Dr. Nancy L. Thompson, Department of Chemistry, • \$55,000 • “Total Internal Reflection - Fluorescence Correlation Spectroscopy for Screening the Kinetics of Drug-target Interactions.”

University of North Carolina at Charlotte

Dr. Joanna K. Krueger, Department of Chemistry • \$55,000 • “Protein Conformational Changes Associated with Regulation of the Actin Cytoskeleton as Studied by Small-angle Solution Scattering.”

Wake Forest University School of Medicine

Dr. G.L. Prasad, Department of General Surgery • \$55,000 • “Regulators of Cell Cycle as Novel Markers of Breast Cancer: Studies on HME1.”

Scientific Meeting Grants Program

University of North Carolina at Chapel Hill

Dr. Timothy C. Nichols, Department of Medicine • \$2,500 • “Etiology and Treatment of Coronary Arterial Thrombosis: Basic Science and New Clinical Approaches.”

Education Enhancement Grants Program

Davidson College

Dr. David Wessner and Dr. Karen Bernd, Department of Biology • \$23,430 • “Development of DNA Sequencing and RNA Detection Protocols for the Undergraduate Laboratory.”

Duke University

Thomas B. Mezloff, School of Law • \$20,000 • “Biotechnology Law Curriculum.”

East Carolina University

Dr. Jean-Luc Scemama, Department of Biology • \$76,404 • “Development of a Cell Culture Teaching Facility for Biotechnology Education.”

Lenoir Community College

Dr. John M. Sherman, Biology Department • \$23,079 • “General Biology I: Enhancement Through Molecular Biology and Biotechnology Principles Laboratories.”

Livingstone College

Dr. Sashi Sabaratnam, Mathematics and Sciences Division • \$2,500 • “Faculty Development and Training.”

North Carolina State University

Dr. Steven W. Peretti, Department of Chemical Engineering • \$47,532 • “Bioprocess Technology Teaching Laboratory.”

Biotechnology Education Mini-Grants Program

Catawba Science Center, Hickory

Mark E. Sinclair • \$4,535 • “High School Biotechnology Programs at the Catawba Science Center.”

Enka High School, Enka

Carmela Blankenship Blackwell • \$3,326 • “Examination of Contemporary Issues in Biotechnology in an Advanced Biology Course.”

Fred T. Foard High School, Newton

Thea Sinclair • \$4,813 • “Incorporation of Hands-on Activities in Introductory-level and Advanced Placement Biology Courses.”

Northwest Cabarrus High School, Concord

Joni Driscoll • \$4,349 • “Enhancement of Advanced Placement Biology and Applied Biochemistry Courses with Hands-on DNA-based Activities.”

Raleigh Charter High School, Raleigh

Amy Koch • \$4,766 • “Mystery of the Crooked Cell.”

Waynesville Middle School, Waynesville
Aleasa S. Glance • \$4,652 • “Comparison of
Plant and Animal Cells in the Eighth Grade
Exploring Biotechnology Class.”

Faculty Sabbaticals in Industry Program

Barton College

In partnership with Apex Bioscience Inc.
Dr. Paul Demchick, Department of Biological
and Physical Sciences • \$5,000

North Carolina A&T State University

In partnership with Ajinomoto USA Inc.
Dr. Keith Schimmel, Department of Chemical
Engineering • \$5,000

University of North Carolina
at Greensboro

In partnership with Biogen Inc.
Dr. Karen Katula, Department of Biology •
\$5,000

Hurricane Floyd Relief Grants

Chowan College

Dr. James B. Dewar Jr., Science Department •
\$205

East Carolina University

Dr. Edmund J. Stellwag, Department of
Biology • \$1,800

Historically Minority Universities Biotechnology Program Initiative

Elizabeth City State University

Dr. Ronald H. Blackmon and Dr. Gary L.
Harmon, Department of Biology • \$160,000 •
“ECSU Biotechnology Program Initiative:
Phase VII.”

Fayetteville State University

Dr. Valeria P. Fleming, Department of Natural
Sciences • \$152,500 • “Biotechnology
Program Enhancement: Phase II
Continuation.”

North Carolina A&T State University

Dr. Marihelen Kamp-Glass, Department of
Natural Resources • \$147,774 • “Enhancing
Biotechnology Capabilities.”

North Carolina Central University

Dr. Goldie S. Byrd and Dr. James M. Schooler,
Department of Biology and Chemistry •
\$160,000 • “Enhancing Minority
Representation in Biotechnology: An NCCU
Interdisciplinary Approach.”

University of North Carolina at Pembroke

Dr. Leonard Holmes and Dr. David Maxwell,
Department of Chemistry and Physics •
\$158,000 • “A Comprehensive Biotechnology
Program at UNC Pembroke: Year Seven.”

Winston-Salem State University

Dr. Kim H. Tan and Dr. Ann Weigl, Project
Strengthen • \$156,000 • “Advancing
Interdisciplinary Biotechnology Programs: A
Winston-Salem State University Approach.”

Biotechnology Event Sponsorships Program

Council for Entrepreneurial Development,
Research Triangle Park

Dan Allred • \$300 • “Information Sharing
Meeting with Pat Snider of BIO/START.”

Monica Doss • \$250 • “Sixteenth Annual
Conference on Entrepreneurship.”

Cathy Trask • \$1,500 • “Venture 2000.”

Duke University

Dr. David R. McClay, Cell and Molecular
Biology Training Program • \$1,500 •
“Conversations that Matter: Molecular
Mechanisms of Cell Communication.”

Duke University Medical Center

Dr. Daniel P. Kiehart, Program in Genetics •
\$1,500 • “Genomics and Proteomics: From
Sequence to Biology.”

Licensing Executives Society

F. Michael Sajovec • \$300 • “Seeking Partners
and Funding from Europe: The Basics.”

National Institute for Environmental
Health Sciences

Dr. Heather Cross • \$2,000 • “Third Annual
NIEHS/NTA Biomedical Science and Career
Fair.”

North Carolina Academy of Science

Dr. Susan Stephenson, Secretary • \$1,250 •
“Ninety-seventh Annual Meeting of the N.C.
Academy of Science.”

North Carolina State University

Dr. Robert Anholt, Department of Zoology • \$750 • “NCSU Program for Behavioral Biology 1999-2000 Seminar Series.”

Dr. William Holton, Department of Electrical and Computer Engineering • \$2,000 • “Intracellular Engineering Workshop.”

Dr. William L. Miller, Department of Biochemistry • \$1,500 • “Triangle Conference on Reproductive Biology: Breast and Prostate Biology.”

Dr. H. Troy Nagle, Department of Electrical and Computer Engineering • \$1,000 • “Tissue Engineering Interest Group Meeting.”

Dr. Neil Olson, College of Veterinary Medicine • \$2,500 • “Animal Genomics 2000 Symposium.”

Small Business and Technology Development Center

Kay Etzler • \$2,000 • “SBIR/STTR Regional Conference.”

Southeastern Life Sciences Association

Rebecca Gessner • \$1,000 • “Southeastern BIO Investor Forum '99.”

University of North Carolina at Asheville

Dr. John G. Stevens, Department of Chemistry • \$1,000 • “Biochemistry and the Undergraduate.”

University of North Carolina at Chapel Hill

Dr. Albert S. Baldwin and Dr. H. Shelton Earp, Lineberger Comprehensive Cancer Center • \$2,000 • “Annual Symposium — Cell Signaling in Human Cancer: Membrane to Nucleus.”

Dr. Stephen Crews, Department of Biochemistry • \$2,000 • “PAS Proteins: Sensors of Environmental and Developmental Signals.”

Dr. David A. Fenstermacher, Program in Molecular Biology and Biotechnology • \$1,500 • “UNC-CH/Glaxo Wellcome Symposium: Bioinformatics and Functional Genomics.”

Dr. Lee M. Graves, Program in Molecular Biology and Biotechnology • \$2,000 • “Cell and Molecular Biology Symposium.”

Dr. Barry R. Lentz, Department of Biophysics • \$2,000 • “Third Annual Triangle Biophysics Symposium.”

University of North Carolina at Greensboro

Dr. Neal Stewart, Department of Biology • \$1,000 • “Novartis Biochemistry/Biotechnology Symposium.”

University of North Carolina at Wilmington

Dr. Ned H. Martin, Department of Chemistry • \$2,000 • “Fourth UNC-W Symposium on Chemistry and Biochemistry.”

Wake Forest University School of Medicine

Dr. K. Bridget Brosnihan • \$2,500 • “Promise of Alcohol Research for Treatment and Prevention.”

Visiting Industrial Scientists Program

North Carolina A&T State University

Dr. Mary A. Smith and Dr. Doretha Foushee, Department of Biology • \$2,500 • “Visit by Dr. Harold Davis, Senior Director of Toxicology and Laboratory Animal Resources, Amgen Inc.”

Program Initiation Grants

Fisheries Development Foundation of North Carolina

Karla L. Gwaltney • \$20,000 • “Sustainable Oyster Aquaculture Study.”

Greater Triangle Regional Council

Pam Wall, Executive Director • \$2,500 • “Clusters of Innovation Project.”

North Carolina Association for Biomedical Research

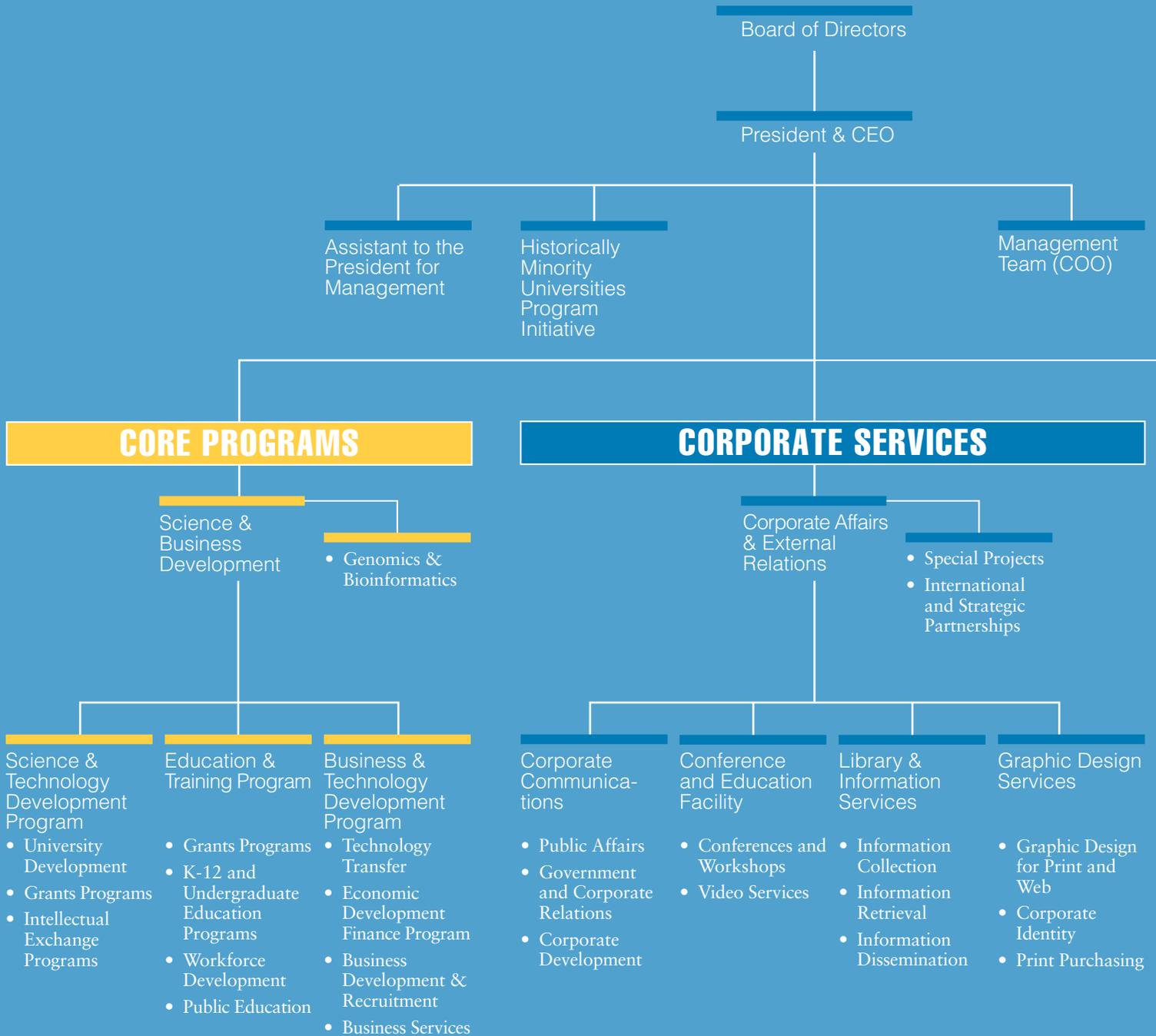
Karen S. Hoffman, President • \$6,600 • “The Economic Impact of Bioscience R&D in North Carolina.”

North Carolina Association for Biomedical Research

Karen S. Hoffman, President • \$5,000 • “A Celebration of Bioscience Research in North Carolina.”

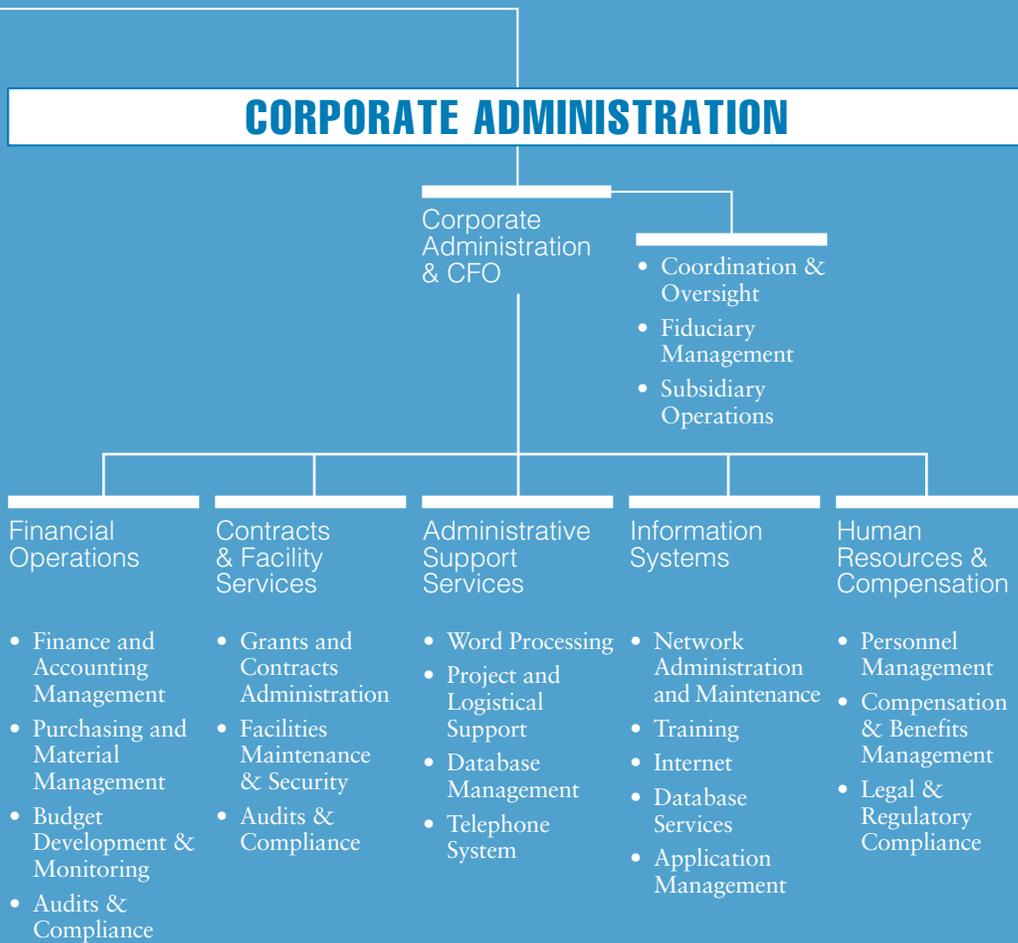
North Carolina Department of Commerce

Jim Nichols • \$1,000 • “State of North Carolina/U.S. Ambassador to Canada Fourth of July Event.”



The North Carolina Biotechnology Center

PROGRAM STRUCTURE AND TASK AREAS



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CONSOLIDATED FINANCIAL STATEMENTS

Independent Auditors' Report

The Board of Directors
North Carolina Biotechnology Center and Subsidiary:

We have audited the accompanying consolidated statements of financial position of the North Carolina Biotechnology Center and Subsidiary, a component unit of the State of North Carolina, as of June 30, 2000 and 1999, and the related consolidated statements of activities and changes in net assets and cash flows for the years then ended. These consolidated financial statements are the responsibility of the Center's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. 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 consolidated financial statements referred to above present fairly, in all material respects, the financial position of the North Carolina Biotechnology Center and Subsidiary at June 30, 2000 and 1999, and the changes in their net assets and their cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America.

KPMG LLP

August 4, 2000

Consolidated Statements of Financial Position

June 30, 2000 and 1999

Assets	Totals	
	2000	1999
Cash	\$ 1,464,085	874,878
Investments (note 4)	28,791,022	25,730,345
Receivables:		
Accrued interest receivable	254,282	164,719
Miscellaneous receivables and other assets	33,665	82,879
Receivable from North Carolina Bioscience Investment Fund, LLC	27,850	27,850
Grants/contracts receivable	25,666	1,706
Loans receivable (note 5)	75,000	3,040,000
Notes receivable (notes 2 and 5)	1,975,901	2,026,803
Allowance for uncollectible notes receivable (notes 2 and 5)	(790,361)	(810,721)
<i>Total receivables</i>	<u>1,602,003</u>	<u>4,533,236</u>
Property, plant, and equipment, net (note 6)	<u>5,441,216</u>	<u>5,687,821</u>
Total assets	<u>\$ 37,298,326</u>	<u>36,826,280</u>
Liabilities and Net Assets		
Accounts payable and accrued expenses	\$ 87,593	132,015
Grants/contracts payable (note 7)	6,954,162	7,009,850
Note payable (note 3)	—	3,000,000
Deferred revenues (notes 2 and 11)	<u>1,839,177</u>	<u>1,498,832</u>
<i>Total liabilities</i>	<u>8,880,932</u>	<u>11,640,697</u>
Net assets:		
Unrestricted net assets:		
Designated for specific purposes	22,211,010	20,544,916
Undesignated	6,107,368	4,577,161
Temporarily restricted	<u>99,016</u>	<u>63,506</u>
<i>Total net assets</i>	<u>28,417,394</u>	<u>25,185,583</u>
Total liabilities and net assets	<u>\$ 37,298,326</u>	<u>36,826,280</u>

See accompanying notes
to consolidated financial
statements.

Consolidated Statements of Activities and Changes in Net Assets

Years ended June 30, 2000 and 1999

	Totals	
	2000	1999
Unrestricted revenues, gains and other support		
Grants and contracts:		
State of North Carolina (<i>note 11</i>)	\$ 9,328,287	17,884,403
Note repayments	355,235	179,551
Interest (<i>note 8</i>)	1,580,906	1,462,952
Conference and educational facility	481,430	429,948
Other	481,504	138,429
Realized and unrealized gain on investments	189,380	3,071
Net assets released from restrictions	32,340	32,013
<i>Total unrestricted revenues, gains and other support</i>	<u>12,449,082</u>	<u>20,130,367</u>
Expenses and losses:		
Science and technology development:		
Academic research initiation grants	1,058,369	772,742
Institutional development grants	1,116,676	1,270,141
Multidisciplinary research grants	499,349	—
Collaborative funding program	432,340	270,352
Education and training program grants	196,649	178,866
Public HMU program initiative	701,496	1,175,690
Economic development	258,472	647,067
Scientific and biotechnology event grants	32,650	33,576
Conference and educational facility	482,452	552,878
Library	241,465	174,787
Workforce training project	132,456	73,735
Intellectual exchange activities	40,154	48,640
Forestry biotechnology initiative	27,911	24,921
Other programs	39,608	5,799
Program management	2,280,288	2,170,726
General and administrative	1,712,446	1,750,004
<i>Total expenses and losses</i>	<u>9,252,781</u>	<u>9,149,924</u>
Change in unrestricted net assets	<u>3,196,301</u>	<u>10,980,443</u>
Temporarily restricted revenues:		
Contributions	67,850	20,400
Net assets released from restrictions	(32,340)	(32,013)
Change in temporarily restricted net assets	<u>35,510</u>	<u>(11,613)</u>
Change in total net assets	3,231,811	10,968,830
Net assets, beginning of year	<u>25,185,583</u>	<u>14,216,753</u>
Net assets, end of year	<u>\$ 28,417,394</u>	<u>25,185,583</u>

See accompanying notes
to consolidated financial
statements.

Consolidated Statements of Cash Flows

Years ended June 30, 2000 and 1999

	2000	1999
Cash flows from operating activities:		
Change in total net assets	\$ 3,231,811	10,968,830
Adjustments to reconcile change in total net assets to net cash provided by operating activities:		
Depreciation	348,026	353,633
Loss on sale of property and equipment	574	1,042
Realized and unrealized gain on investments	(189,380)	(3,071)
Equity in loss from affiliate	223,816	196,875
Increase (decrease) in cash due to changes in:		
Grants/contracts receivable	(23,960)	1,470
Notes receivable	50,902	(526,548)
Allowance for uncollectible notes receivable	(20,360)	210,619
Accrued interest receivable	(89,563)	7,050
Miscellaneous receivables and other assets	49,214	19,039
Receivable from North Carolina Bioscience Investment Fund, L.L.C.	—	(27,850)
Accounts payable and accrued expenses	(44,422)	(15,942)
Grants/contracts payable	(55,688)	(385,403)
Deferred revenues	340,345	(7,389,405)
<i>Net cash provided by operating activities</i>	<u>3,821,315</u>	<u>3,410,339</u>
Cash flows from investing activities:		
Proceeds from sale of property and equipment	630	—
Purchase of property and equipment	(102,625)	(74,769)
Proceeds from sale of investments	55,082,504	89,410,317
Purchase of investments	(58,177,617)	(92,581,334)
Payment of note payable	(3,000,000)	—
Issuance of loan receivable	2,965,000	(40,000)
<i>Net cash used by investing activities</i>	<u>(3,232,108)</u>	<u>(3,285,786)</u>
<i>Net increase in cash</i>	589,207	124,553
Cash, beginning of year	<u>874,878</u>	<u>750,325</u>
Cash, end of year	<u>\$ 1,464,085</u>	<u>874,878</u>
Supplemental disclosure of cash flow information:		
Cash paid during the year for interest	<u>\$ 167,217</u>	<u>240,289</u>

See accompanying notes to consolidated financial statements.

Notes to Consolidated Financial Statements

June 30, 2000 and 1999

(1) Organization and Summary of Significant Accounting Policies

(a) Organization and Purpose

The North Carolina Biotechnology Center (the “Center”) was incorporated on August 30, 1984 for the purpose of furthering economic development in North Carolina through education, research and commercial development in biotechnology. The Center aids the biotechnology-related efforts of researchers, businesses, state and federal governments, and other agencies primarily through awards of research grants restricted to specific programs.

The Plant Fund is used to account for all property, plant and equipment transactions.

The Economic Development Investment Fund is used to account for financial assistance awards made to young and growing biotechnology / bioscience companies (see note 2). The Economic Development Investment Fund also makes loans to established companies (see note 5).

The North Carolina Bioscience Ventures LLC (“Ventures”) is a wholly-owned subsidiary of the Center which is used to account for a special \$10 million appropriation to the Center from the State of North Carolina. The purpose of the appropriation and establishment of Ventures is to promote development of the bioscience industry in North Carolina. The appropriation remains in Ventures until funds are drawn down by the North Carolina Bioscience Investment Fund LLC (“BIF”). The BIF is responsible for investing funds of the Center along with funds from other investors into portfolio companies.

(b) Basis of Accounting and Presentation

The financial statements have been prepared using the accrual basis of accounting.

Net assets and revenues, expenses, gains and losses are classified based on the existence or absence of donor-imposed restrictions. Accordingly, net assets of the Center and changes therein are classified and reported as follows:

Unrestricted net assets — Net assets that are not subject to donor-imposed stipulations.

Temporarily restricted net assets — Net assets subject to donor-imposed stipulations that may or will be met either by actions of the Center and/or the passage of time.

Revenues are reported as increases in unrestricted net assets unless use of the related asset is limited by donor-imposed restrictions. Expenses are reported as decreases in unrestricted net assets. Gains and losses are reported as increases or decreases in unrestricted net assets unless their use is restricted by explicit donor stipulation or by law. Expirations of temporary restrictions on net assets (i.e., the donor-stipulated purpose has been fulfilled and/or the stipulated time period

has elapsed) are reported as reclassifications between the applicable classes of net assets.

(c) Principles of Consolidation

The consolidated financial statements include the financial statements of North Carolina Biotechnology Center and its wholly-owned subsidiary. All significant intercompany balances and transactions have been eliminated in consolidation.

(d) Significant Accounting Policies

The following significant accounting policies have been used in the preparation of the financial statements:

Cash and Investments

The Center invests funds not immediately needed for day-to-day operations in short-term investments consistent with guidelines established by the Board of Directors. These guidelines require that the Center invest only in certain financial instruments considered to be both conservative and adequately diversified. The Center records its investments in equity securities with readily determinable fair values and all investments in debt securities at fair value with gains and losses included in the statement of activities and changes in net assets.

A cash management advisory committee periodically reviews the Center’s investment portfolio.

Grants/Contracts Receivable, Loans Receivable and Notes Receivable

An allowance for uncollectible receivables has been provided for notes receivable. All of the Center’s other grants, contracts and loans receivable are considered to be fully collectible.

Property, Plant, and Equipment

Property, plant, and equipment are recorded at cost. Depreciation is provided using the straight-line method over the estimated useful lives of five years for furniture, fixtures and equipment and thirty years for the Center’s permanent headquarters.

Recognition of Grant Awards and Grants Payable

Grant awards and the corresponding grants payable are recognized at the time the grant award letter is sent to the recipient.

Contributions

Contributions, including unconditional promises to give, are recognized as revenues in the period received. Conditional promises to give are not recognized until they become unconditional, that is, when the conditions on which they depend are substantially met. Contributions of assets other than cash are recorded at their estimated fair value.

Temporarily Restricted Net Assets Released from Restrictions

By holding consortium events, purchasing teachers' training supplies, and holding biochemistry and enzymology club and various other meetings, the Center released \$32,340 of temporarily restricted net assets from donor restrictions in 2000. By holding a biotechnology reception, purchasing lab demonstration supplies, and holding a triangle virology program, the Center released \$32,013 of temporarily restricted net assets from donor restrictions in 1999.

Recognition of Funding

Funds are granted periodically from private and public agencies for specific purposes or to aid the Center's general operation and sustain its continued existence. Funds granted for specific purposes are deemed to be earned and reported as revenue when the Center has incurred expenditures in compliance with the grant agreement. Such amounts received, but not yet earned, are reported as deferred revenues.

The Center received 75% and 89% of its unrestricted revenues from the State of North Carolina in 2000 and 1999, respectively.

Functional Allocation of Expenses

The costs of providing the various programs and activities of the Center have been summarized on a functional basis in the statement of activities and changes in net assets. Certain general and administrative expenses totaling \$657,253 and \$595,792 for years ended June 30, 2000 and 1999, respectively, have been allocated among the programs and activities benefited.

Income Taxes

The Center is exempt from payment of income taxes under the provisions of Section 501(c)(3) of the Internal Revenue Code, except for any unrelated business income. Since there was no unrelated business net income during 2000 and 1999, no provision for income taxes has been made. Ventures, a wholly-owned subsidiary of the Center, is exempt from income taxes except for any unrelated business income. The Center has applied for a determination letter for Section 501(c)(3) tax status for Ventures.

Use of Estimates

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

Reclassifications

Certain prior year amounts have been reclassified to conform to 2000 presentation. These reclassifications had no effect on the previously reported total net assets.

(2) Economic Development Investment Fund

Through its Economic Development Finance Program, the Center supports research and development projects of young and growing biotechnology / bioscience companies that may not yet qualify for conventional forms of financial assistance. Since 1988, most awards to companies have been in the form of notes, and all amounts, including interest, are to be repaid in full within one to seven years of the date of the note.

The Center accounts for these awards as expenses in the year the award is issued and as revenue in the year the award is repaid because the likelihood of collecting the awards is unknown. Interest income is not recognized for financial reporting purposes until it is collected. Notes receivable are reported net of an allowance for uncollectibles with a corresponding deferred revenue for the estimated collectible balance, since the companies' ability to repay the amounts is contingent on their ability to survive as profitable entities. The net receivable and related deferred revenues at June 30, 2000 and 1999 were \$1,185,540 and \$1,216,082, respectively.

(3) Note Payable

In 1995, to facilitate a \$3,000,000 BioProcessing Facility Finance Loan (note 5) to Covance Biotechnology Services, Inc., the Center obtained a \$3,000,000 note with a lending institution. Interest, at an annual rate of 7.9%, was payable quarterly. The principal was repaid on December 30, 1999.

(4) Investments

The aggregate values of investments at June 30, 2000 and 1999 were as follows:

	2000			
	Cost	Gross Unrealized Gains	Gross Unrealized Losses	Market Value
Stocks	\$ 88,118	—	(49,929)	38,189
Certificates of deposit	2,825,000	—	—	2,825,000
Commercial paper	21,583,474	—	—	21,583,474
Bioscience Investment Fund	3,679,309	—	—	3,679,309
Investments in joint ventures	665,050	—	—	665,050
	<u>\$ 28,840,951</u>	<u>—</u>	<u>(49,929)</u>	<u>28,791,022</u>

	1999			
	Cost	Gross Unrealized Gains	Gross Unrealized Losses	Market Value
Stocks	\$ 88,117	—	(63,365)	24,752
Certificates of deposit	1,350,000	—	—	1,350,000
Commercial paper	22,275,918	—	—	22,275,918
Bioscience Investment Fund	1,803,125	—	—	1,803,125
Investments in joint ventures	276,550	—	—	276,550
	<u>\$ 25,793,710</u>	<u>—</u>	<u>(63,365)</u>	<u>25,730,345</u>

Additionally, in connection with Economic Development Finance awards, the Center receives the right to purchase company stock in various biotechnology / bioscience companies. As of June 30, 2000, the Center received warrants to purchase 176,580 common shares and 42,500 preferred shares with exercise prices ranging from \$0.30 to \$600 per share. These warrants expire at various dates through 2007. Value has not been attributed to these warrants; accordingly, they are not reflected in the financial statements.

The Bioscience Investment Fund represents approximations drawn down from the wholly-owned Ventures. This investment is accounted for on the equity method. All balances included as commercial paper in Ventures are available for investment in the BIF.

(5) Loans and Notes Receivable

Loans and notes receivable related to the Economic Development Investment Fund at June 30, 2000 and 1999 consisted of the following:

Loans receivable:	2000	1999
Loan receivable dated April 20, 1995 from Covance Biotechnology Services, Inc. Interest is payable quarterly at an annual rate of 2.50% with the principal balance paid in December 1999. The loan was fully guaranteed by Covance, Inc.	\$ —	3,000,000
Loan receivable dated October 15, 1998 from Eno River Capital, L.L.C. Interest is payable along with the principal in one lump sum on October 15, 2005. Interest rate is 6.25% per year on the unpaid principal balance.	75,000	40,000
Loans receivable	<u>\$ 75,000</u>	<u>3,040,000</u>

Notes receivable:	2000	1999
Notes receivable from various state biotechnology companies under Economic Development Finance awards. Interest rates on these notes vary from 6.25% to 15.00%. Generally, principal and interest are payable one to five years from the execution of the note. Due dates range from 2000 to 2008.	\$1,314,481	1,539,687
Notes receivable from various state biotechnology companies under Small Business Innovation Research awards. Interest rates on these notes vary from 8.25% to 8.50%. Generally, principal and interest are payable one to seven years from the execution of the note. Due dates range from 2000 to 2001.	129,971	149,998
Notes receivable from various state universities under Patent Funding Assistance awards. These notes bear a flat interest fee of \$2,000. Principal and interest are payable upon transfer, assignment, or license of patent for compensation.	23,583	29,583
Notes receivable from various state biotechnology companies under the Collaborative Funding Assistance Program. Interest rates on these notes vary from 8.25% to 8.75%. Generally, principal and interest are payable one to five years from the execution of the note. Due dates range from 2000 to 2001.	60,000	69,000
Notes receivable from various state biotechnology companies under Proof of Principle Awards. Generally, principal and interest are payable within five years, if the technology or intellectual property is sold, transferred, assigned or licensed. However, there is no interest if paid in the first year.	42,050	42,050
Notes receivable from various state biotechnology companies under Business Development Awards. Interest rates on these notes vary from 10.00% to 11.00%. Generally, principal and interest are payable one to three		

years from the execution of the note. Due dates range from 2000 to 2003.	<u>2000</u>	<u>1999</u>
	56,483	27,152
Notes receivable from various state biotechnology companies under Small Business Research Awards. Generally, principal and interest are payable one to seven years from execution of the note. Due dates range from 2005 to 2007.	<u>349,333</u>	<u>169,333</u>
Less allowance for uncollectible notes receivable	<u>1,975,901</u>	<u>2,026,803</u>
	<u>790,361</u>	<u>810,721</u>
Notes receivable, net	<u>\$1,185,540</u>	<u>1,216,082</u>

(6) Property, Plant, and Equipment

A summary of property, plant, and equipment at June 30, 2000 and 1999 follows:

	<u>2000</u>	<u>1999</u>
	<u>Plant Fund</u>	<u>Plant Fund</u>
Building	\$7,270,412	7,270,412
Furniture, fixtures, and equipment	1,570,168	1,614,127
Construction in progress	<u>44,215</u>	<u>—</u>
	8,884,795	8,884,539
Less accumulated depreciation	<u>3,443,579</u>	<u>3,196,718</u>
	<u>\$ 5,441,216</u>	<u>5,687,821</u>

(7) Grants and Contracts Payable

The Center has committed grants and contracts to various research programs, primarily through major universities and biotechnology companies located in North Carolina. These grants and contracts payable at June 30, 2000 are expected to be paid as follows:

Year ending June 30,	Programs and Operating Fund	Economic Development Investment Fund	Total
2001	\$ 5,259,871	298,825	5,558,696
2002	<u>1,362,475</u>	<u>32,991</u>	<u>1,395,466</u>
	<u>\$ 6,622,346</u>	<u>331,816</u>	<u>6,954,162</u>

(8) Interest Income

Interest income of \$1,443,997 and \$1,290,592 was earned during the years ended June 30, 2000 and 1999, respectively, primarily by investing in certificates of deposit, commercial paper and U.S. Government securities. Interest income collected on notes and loans receivable in 2000 and 1999 totaled \$136,909 and \$172,360. No interest income has been recorded as deferred revenue.

(9) Pension Plan

The Center has a defined contribution pension plan covering all qualified employees who have completed one year of ser-

vice. The Center's contribution is 11.00% of pre-tax compensation for eligible employees. Employees are fully vested in the plan assets upon participation. Approximately \$169,000 and \$177,000 was contributed to the plan during the years ended June 30, 2000 and 1999, respectively. The plan is self-directed, with the majority of participants electing mutual funds. Additionally, after six months of employment, all regular employees are eligible to participate in a 403(b)(7), tax-deferred supplemental retirement plan. Participants may contribute subject to prevailing Internal Revenue Service regulations.

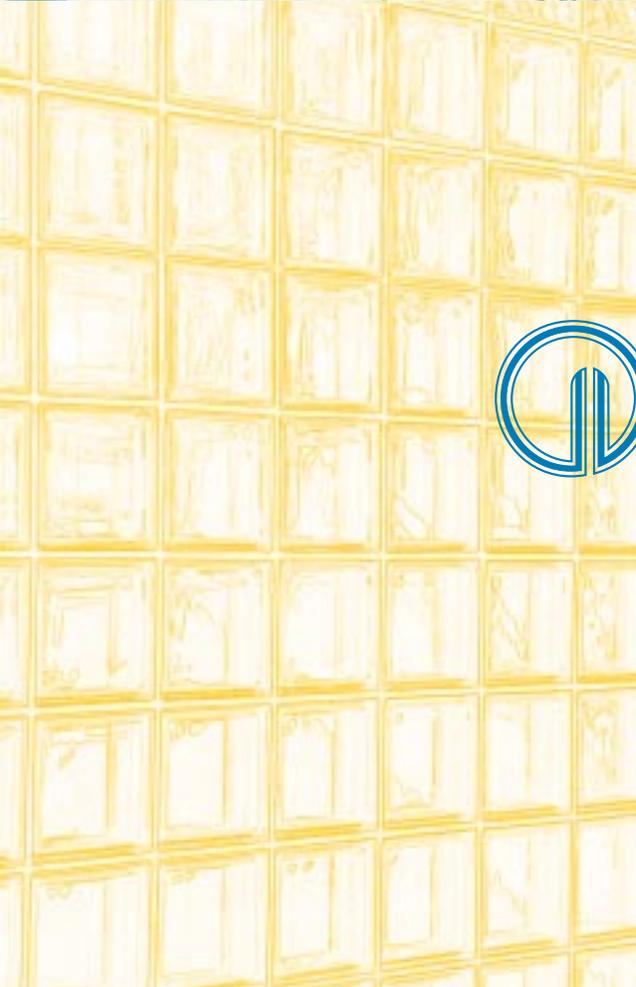
(10) Operating Leases

The Center has acquired the right to use the land on which its building is constructed through an operating lease agreement with another nonprofit organization, the Triangle Universities Center for Advanced Studies, Inc. (TUCASI). Title to the land remains with TUCASI.

Payments to TUCASI under the agreement are at the nominal rate of \$1 per year, and the Center pays all costs of insurance, taxes, and maintenance as defined in the lease agreement.

(11) Component Unit Disclosure

The Center is considered a component unit of the State of North Carolina because a controlling majority of the Center's Board of Director's members consists of state or local government representatives. During 2000, the Center received \$9,638,913 in state funds, of which \$310,626 was deferred because funds have not yet been expended for their intended purpose. During 1999, the Center received \$10,138,913 in state funds. All was expended for their intended purpose.



North Carolina Biotechnology Center

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