

# **The North Carolina Biotechnology Center**

## **Report to the Joint Legislative Commission on Governmental Operations and the Fiscal Research Division**

### **Contents of report:**

- Prior State fiscal year program activities, objectives, and accomplishments.
- Prior State fiscal year itemized expenses and fund sources.
- Detail schedule of awards

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## **North Carolina Biotechnology Center 2013-14 Accomplishments**

The Biotechnology Center continues its support of the nation's fastest growing life science cluster. The results show in the jobs: North Carolina's life science industry grew by 7 percent during the Great Recession. This is in contrast to national life science employment and North Carolina's private sector employment, which both contracted from 2007 to 2012.

More than 600 life science companies employ 60,000 North Carolinians, who make an average salary of \$81,000. Each biotech job creates a total of 5.7 jobs for the economy, according to Battelle's 2014 report for the Biotechnology Industry Organization. This is also reflected in the nearly 3,000 bioscience support companies tracked by the NCBiotech library. Overall, the life science industry and its ripple effects generate \$59.0 billion in revenues and \$1.73 billion in state and local taxes.

NCBiotech's activities and sponsored events spur innovation, technology transfer, company creation and growth, and company recruitment. NCBiotech awarded nearly \$7 million during the fiscal year and implemented multiple non-funding programs to move life science ideas to market for the state.

### **From idea to product**

The Biotech Center primes the pipeline with research grants targeted to innovation. Grants provide funds to pay for research equipment used by several researchers, to test new research ideas, to encourage commercialization, and to build statewide biotechnology development capacity.

Grant proposals are reviewed by staff scientists, then peer-reviewed and evaluated by scientists outside of North Carolina. Grant recipients, on average, go on to attract an additional \$28 per \$1 granted, mostly from federal agencies. These awards by program are:

- Biotechnology Research Grants      \$287,602
- Collaborative Funding Grants      \$400,000
- Institutional Development Grants    \$1,825,208

Taking ideas from lab to market requires both funding and services. NCBiotech's Business and Technology Development Program provides both to spur the inception and growth of North Carolina life sciences companies. Three loan programs and one grant program provide funding for company inception, technology development and corporate growth. Loan proposals are reviewed by staff business and science experts, then larger loans are further evaluated by external business and science experts from North Carolina and outside of North Carolina. Award totals for this fiscal year are:

- Technology Enhancement Grant      \$128,340
- Company Inception Loan      \$300,000
- Small Business Research Loan      \$2,011,717
- Strategic Growth Loan      \$420,700

The Business and Technology program also provides a number of support services that create an environment for these portfolio companies to succeed. This includes BATON, which is a network of service providers (staffing agencies, accountants, writers, etc.) committed to supporting startup activities often at a discounted cost. NCBIotech VC Fly-In events take promising companies to meet venture capital firms where they are – in San Francisco, Boston and New York. Partnering events help companies large and small match available technologies with business needs. The team also continued venture philanthropy communications, which has set up several high-profile events in the 2015 fiscal year.

This two-pronged approach helps portfolio companies leverage significant follow-on investment. To date, for every dollar awarded by the Biotechnology Center, recipients have received \$117 in follow-on funding from external sources.

### **Emerging sectors**

With several hundred miles of coastline, North Carolina has a keen interest in marine science. The Marine Biotech Center of Innovation continues to form partnerships in the Eastern part of the state. The COI in partnership with NCBIotech's Southeastern Office has won the BioMarine Business Conference, to be held in October 2015 in Wilmington.

NCBIotech has also dedicated significant resources to developing bio defense opportunities. NCBIotech has taken a broad view of this sector:

- Critical countermeasures - biodefense and emerging infectious diseases, including the detection of bioterrorist agents; development of countermeasures such as vaccines; protection of water, food, and energy supplies; and biohazard containment.
- Department of Defense's extramural medical research program, which range from biomedical areas, such as cancer and traumatic brain injury, to combat casualty care and warfighter restoration.
- Veterans Administration R&D activities - a well-developed network of medical research activities closely aligned with local universities and their industry partners.

Investigational activities led to a Bio Defense Summit in August of 2014. This drew several high-level state and federal officials to help focus on new opportunities for North Carolina. Speakers included North Carolina Secretary of Commerce Sharon Decker, Gov. Pat McCrory's military advisor Major General (ret) Cornell Wilson and the NC Military Foundation's Lance DeSpain. Federal leaders of the Biomedical Advanced Research Development Authority (BARDA), the Army Research Office (ARO) and Defense Threat Reduction Agency (DTRA) also presented.

### **Agricultural Biotechnology**

Agriculture and agribusiness – food, fiber and forestry – generate \$78 billion in annual revenues for North Carolina's economy. We've positioned our state as a global ag biotech leader by combining our well-established biotechnology base with our wide-ranging agricultural assets to create new jobs, new crops, new uses for existing crops and improved ways to heal, feed, clothe and fuel the world. We now have over 80 ag biotech companies.



Our big global ag biotech firms have invested some \$270 million in RTP alone, with more expansions planned.

Our AgBiotech Initiative:

- Oversaw the first project of the NC Biotechnology Crop Commercialization Center, funded by several industry groups to replace feed corn for the meat animal industry, increasing sorghum production five-fold and creating significant cost savings.
- Supported small-company growth with the AgBIOCEPS database of the state's entrepreneurial companies. Staff from the Initiative traveled to several trade shows, including BIO 2014, to promote partnerships for these companies
- Developed and produced the fourth week-long Ag Biotech Industry in the Classroom summer workshop, with funding by area industry, for NC's middle and high school science and ag teachers. These workshops stimulate student interest in ag and ag biotech careers. To date they've trained 70 teachers and reached an estimated 35,000 students statewide.
- Organized and hosted the Ag Biotech Entrepreneurial Showcase in May where 150 entrepreneurs, investors, and technology scouts heard nine ag biotech business leaders pitch their companies' assets. The event also included panel discussions and keynotes by CEOs of high-tech food companies.

State funding was supplemented by additional grants to achieve these outcomes.

### **Statewide Development**

The preceding programs are designed to grow biotechnology companies in North Carolina from North Carolina research. The Biotech Center also works with statewide partners to bring biotechnology companies to the state, to expand existing capabilities and to capitalize on regional assets. With low business costs and specialized strengths in vaccine and pharmaceutical production, cancer research and medical research, North Carolina has a strong value proposition for companies looking to locate new facilities. The Center's recruitment team continues to work closely with the N.C. Department of Commerce on projects with new potential for job creation and investment. At the time of this report, 18 projects with more than 1,700 jobs are being recruited.

Significant news this year includes:

- Novozymes' expansion to Wake County will invest \$36M and create 100 jobs.
- Tyton Biofuels will bring a processing plant to Sampson County and a research facility to Wake County. The investment totals \$200M.
- Merz Pharma relocated its headquarters from Guilford to Wake County, keeping 200 jobs in North Carolina and creating 50 more.
- Novartis' \$1B cell-culture vaccine facility, announced in 2008, was given FDA approval to begin producing vaccine. The pharmaceutical giant also opened an RTP research facility.

NCBiotech's statewide offices were instrumental in several recruitment projects, including Tyton Biofuels and Genome ID. With the help of their regional advisory committees, the offices continue to make strides matching regional strengths with the life science. Specific accomplishments are scattered throughout this report.

### **Workforce Development**

NCBiotech closed its Education and Training Program in August 2013 as part of restructuring following budget cuts. NCBiotech staff continues to support education and training partners, including the UNC System, private universities and colleges, and the NC Community College System, in delivering life-science education. North Carolina's highly trained workforce is a competitive advantage for the state.

Extending its workforce mission directly to the job seeker, NCBiotech hosted more than 1,000 Jobs Network participants at monthly programs for NC life science professionals in career transition. Programs included access to hiring managers and recruiters as well as expert guidance on job search techniques and resources, career opportunities, support systems and more. The network now links participants in Wilmington and Kannapolis electronically.

### **Biotech Community**

The Biotech Center continues to provide and promote two dozen networking groups, events and programs that create the right environment for small company growth. Part of the success of this environment is reflected in the statistic that shows 7 percent job growth during recession.

Several event highlights include:

- More than two dozen scientific and business networking groups welcomed several thousand participants to events throughout the year.
- Triad Bionight included the keynote address from U.S. Department of Health and Human Services Assistant Secretary Ned Holland. More than 400 hundred attended the biennial gala.
- NCBiotech Partnering at the CED Life Science Conference connected startups, larger companies and investors with each other. The annual event tallied more than 200 meetings.

This is in addition to a variety of local and regional events that showcase the Center's and North Carolina's strengths to the world. The largest was the North Carolina pavilion at the Biotechnology Industry Organization's annual convention. Coordinated by the Biotech Center, the pavilion included 28 sponsors from across the state. Company sponsors held a total of 94 partnering meetings at the conference, 80 in the N.C. Pavilion.

The Biotech Center continues to welcome approximately 30,000 guests each year to its Hamner Conference Center. Events range from client presentations to board meetings to trade shows. Hundreds of visitors use the library's resources specific to the business of biotechnology.

## **Looking to the Future**

NCBiotech has just finished a year of reorganization and program examination, following a 26 percent reduction in budget and staff. Small company growth programs, company recruitment, and sector development for bio defense and ag biotech emerged as top priorities. NCBiotech will move forward with that approach, and a new leader in FY 2015, to continue maximizing state resources to create high-paying jobs for North Carolina.

For the most up-to-date information on the Biotech Center, please visit our Web site, [www.ncbiotech.org](http://www.ncbiotech.org).



# North Carolina Biotechnology Center

## Report of Fund Sources and Expenses

### Fiscal Year Ending June 30, 2014

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#### Fund Sources:

Unrestricted Revenues	
State Appropriation	\$12,600,338
Hamner Conference Center	304,677
Other, net	1,079,499
Restricted Revenues	
Contributions	<u>680,984</u>
Total Revenues	<u>\$14,665,498</u>

#### Expenditures:

Science & Technology Development	\$ 2,681,733
Statewide Development	1,324,545
Business & Technology Development	1,383,882
Education & Training	3,447
Hamner Conference Center	727,516
Library & Information Services	705,847
Centers of Innovation	700,025
AgBiotech Initiatives	297,499
Other Programs	218,379
Program Management	4,685,821
General & Administrative	<u>2,906,578</u>
Total Expenditures	<u>\$15,635,272</u>

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**Note:** Figures above are on an accrual basis. The final quarterly report filed with the Department of Commerce is on a cash basis. This schedule will reconcile to our audited financial statements as of June 30, 2014.

# North Carolina Biotechnology Center

## Report of Awards by Program

### Fiscal Year Ending June 30, 2014

Program Area Program Category	Record Count	Amount	Percent of Total
<b><u>Business Financing</u></b>			
Company Inception Loan	6	\$ 300,000	5%
Small Business Research Loan	13	\$ 2,011,717	31%
Strategic Growth Loan	2	\$ 420,700	7%
Industrial Fellowship Program	5	\$ 220,000	3%
Industrial Internship Program	7	\$ 21,000	< 1%
<i>Total Business Financing</i>	33	\$2,973,417	46%
<b><u>Event Support</u></b>			
Biotechnology Event Sponsorships	17	\$ 32,490	<1%
Biotechnology Meeting Grants	5	\$ 30,500	<1%
<i>Total Event Support</i>	22	\$ 62,990	1%
<b><u>Research and Equipment Support</u></b>			
Biotechnology Research Grant	3	\$ 287,602	5%
Collaborative Funding Grant	4	\$ 400,000	6%
Institutional Development Grant	12	\$ 1,825,208	28%
Technology Enhancement Grant	3	\$ 128,340	2%
<i>Total Research and Equipment Support</i>	22	\$ 2,641,150	41%
<b><u>Sector and Region Support</u></b>			
Center of Innovation	1	\$ 700,000	11%
Presidential Initiative Award	1	\$ 30,000	< 1%
<i>Total Sector and Region Support</i>	2	\$ 730,000	11%
<b>Grant Totals</b>	<b>79</b>	<b>\$6,407,557</b>	<b>100%</b>