North Carolina Biotechnology Center

ORGANIZATION OVERVIEW AND IMPACT

1. MISSION & PROGRAMS

The North Carolina Biotechnology Center accelerates technology development to create products, companies, investment and jobs. NCBiotech accomplishes these goals by executing a portfolio of programs that include:

- **Job Growth**: Medium and large company recruitment; existing company retention.
- **Company Creation and Growth**: Small business support, including low-interest loans; sector-based support through Centers of Innovation; ag biotech sector growth.
- **Innovation:** Build statewide capacity for researching new ideas; cross-disciplinary research projects and university/company collaborations.
- **Education and Partnering**: K-12 education and worker training; more than 30 scientific and business development groups; high-profile business development and financing events; library specializing in the business of biotechnology.

2. CUSTOMER/ TARGET POPULATION

Our customers are:

- Global, U.S. and N.C. life-science companies, large and small
- Support companies (small businesses, law firms, engineering firms, etc.)
- University and industry scientists
- Employees at life-science and support companies, including job seekers
- University and Community College administrators, instructors and students
- Students at all levels, in addition to the general public (awareness of biotech)

3. ORGANIZATION INCEPTION

NCBiotech was created as a private, non-profit in 1984. Our programs have grown from augmenting the capacity of the state's research infrastructure to growing small companies to recruiting and retaining large companies. Some inception dates:

Job Growth: Joint Commerce position created in 2003; Full program created in 2007.

Company Creation and Growth

- Business Loans – 1989
- Centers of Innovation – First state funding in 2007; first COI funded in 2008
- Ag Biotech – statewide planning report issued in 2009; initiative launched in 2010

Research Support: First grants in 1983 (while a state agency)

Education and Partnering

- First teacher workshops in 1988; first education grants in 1991.
- First statewide office opened in the Piedmont Triad in 2003; Western liaison hired in 2002.
- Longest running scientific networking group – Plant Molecular Biology Consortium, 1983

4. FOOTPRINT

NCBiotech's main offices are in Research Triangle Park with five offices across the state: Asheville, Charlotte, Greenville, Wilmington and Winston-Salem. Each office is staffed with an executive director and coordinator. A regional advisory committee initiates and supports programs in each region. Since our first regional office opened in 2003, a larger percentage of overall funding has flowed across the state.

5. ORGANIZATIONAL BUDGET

The Center follows the state fiscal year, July 1 to June 30.

Financial History Breakdown	Budget	Actual			
	FY 2013	FY 2012	FY2011	FY2010	FY 2009
Revenue History					
State Appropriation	17,200,676	17,551,710	18,819,334	14,069,500	17,679,081
Non-State Funds					
Interest on investments and loans receivable	190,000	270,233	2,812,898	589,410	537,819
Other revenues	660,600	1,086,072	1,130,027	941,358	768,856
Building campaign pledges				496,048	2,834,148
Grants from others	130,000	230,000	630,000	1,719,764	
Hamner Conference Center	222,322	211,706	197,129	218,828	227,565
Total Revenues	18,403,598	19,349,721	23,589,388	18,034,908	22,047,469
Expense History					
State	17,200,676	17,551,710	18,819,334	14,069,500	17,679,081
Non-State	5,685,912	2,158,517	748,823	2,383,573	1,242,860
Total Expenses	22,886,588	19,710,227	19,568,157	16,453,073	18,921,941
Increase(Decrease) in NCBiotech Net Assets	(4,482,990)	(360,506)	4,021,231	1,581,835	3,125,528

Total expenses and revenues above agree to the audited financial statements for 2009 -2012.

Building campaign pledge revenues in 2010 and 2009 were used to support the capitalized building expenses of $8,254,394 and 929,753, respectively.

6. SALARY COMPLIANCE

Name	Annual Salary	State Funds	Non-State Funds
Edgeton, Douglas	$ 200,000		$200,000
Ginsberg, Peter	$ 130,707	$ 120,000	$10,707
Riddick, Gwyn	$ 126,733	$ 120,000	$ 6,733
Tindall, Kenneth	$ 180,188		$ 180,188
Tolson, Norris	$ 257,807		$ 257,807
Wilkins, Michael	$ 171,029	$ 120,000	$ 51,029

Source of funds include, but are not limited to, external contributions, investment returns from non-state funded investments, revenues from services provided by the library or the conference center.

7. LOBBYING SERVICES

- Law/Lobbying firm: Smith, Anderson, Blount, Dorsett, Mitchell & Jernigan LLP: $40,000
- One employee is registered to lobby.

8. KEY PERFORMANCE INDICATORS

Our key performance indicator is the 58,000+ jobs at 500 companies. Other important indicators:

Program	Metric	Direct costs (2012)
Company Creation and Growth		
Business and Technology Development	• $117 leveraged per $1 loaned • Created 2,830 new jobs • $2,500 in net loan disbursements per job • 54 company launches	BTD: $680,171
Centers of Innovation	• Four active COIs (advanced medical technologies, nanobiotech, marine, personalized medicine) • Launchibiliti – Program with Mission Hospital to take staff ideas to products.	COI: $366,598
Ag Biotech	• Biotech Crops Commercialization Center saved $50M+ for NC meat animal industry • Leveraged $929,550 in private funds for programs over 3 years.	Ag Biotech: $579,731
Job Growth		
Bioscience Industrial Development	Since 2008: • 25 company expansions to/within NC • 1,700+ jobs; 7,800+ total jobs • $2.0B in economic activity • $59 million in state and local taxes	BID: $363,186
Innovation		
Science and Technology Development	Return per $1granted: • Collaborative Funding ($69.64) • Faculty Recruitment ($54.92) • Institutional development ($9.49) • Multidisciplinary ($4.32) • Biotech Research ($4.14)	SciTech: $801,181
Education and Partnering		
Education and Training	• 1900+ teachers trained; • 50,000 students reached each year • $7M for lab equipment & courses	EdTrain: $656,455
Partnering • Library	Library stats for FY2012 include: • Nearly 800 requests for information • 590 uses of market research reports • 386 interlibrary loans	Library: $657,916
• Hamner Conf. Center	The Conference Center welcomes 30,000 visitors per year.	HCC: $766,556
• Events	Meetings for small companies to find partners, prepare to present to investors and find funding. 23 scientific and regional networking groups with more than 3,000 attendees.	Includes some above costs & Corp Communications: $810,894

1) Annual awards budget for FY2013 is $9,876,450; 2) Indirect costs total $1,247,490.

9. SIMILAR ORGANIZATIONS

NCBiotech is unique among organizations in the state that conduct economic development, research, education and business development. We bring deep knowledge of life science and a broad understanding of this industry. Others excel in investigating new ideas, educating students, developing products, or recruiting large companies; none focus on life science.

Results of our approach are documented by Battelle: 58,000 employees at more than 500 companies. The ripple effects create $59 billion economic activity annually and 239,000 jobs. Battelle also cites NCBiotech's approach as the right way to integrate all the pieces of an industry cluster. Without integration, the state loses a competitive advantage. A few examples are below. We have more to share.

Company Creation and Growth

NCBiotech Loan Program
Featured Partner: Nearly 150 North Carolina bioscience startup companies
How it's unique: NCBiotech funds companies at a stage when inventors have maxed out their personal resources. Our funds and mentoring position these companies for larger investors (angels, venture capital firms, banks). Multiple CEOs cite NCBiotech's funds as critical in company growth.
Results: For each loan dollar, companies raise an average of $117 in additional funding. Companies created more than 2,800 jobs since the 1990s. NCBiotech loan portfolio companies have been acquired, brought products to market and inked lucrative development deals with large companies.

Biotechnology Crops Commercialization Center
Featured partners: Golden LEAF Foundation, North Carolina Pork Council and Murphy-Brown, LLC.
How it's unique: Through industry connections, NCBiotech's AgBiotech Initiative identified a critical need – the state's pork industry imports the majority of its feed from the Midwest, driving up cost. To grow more food in North Carolina, this coalition is investigating a different crop – sorghum. The industry and academic partners rely on NCBiotech as a neutral facilitator for the process.
Results: Four universities are collaborating to study sorghum's nutritional profile and ways to increase sorghum acreage and yield. From 2011 to 2012, the acreage of grain sorghum increased from 5,000 to 72,000 with a 20-fold increase in production.

Job Growth

Medicago Recruitment
Featured partners: Canadian Consulate, N.C. Department of Commerce, Alexandria Real Estate, BE&K
How it's unique: Canadian company Medicago uses tobacco plants to produce flu vaccine. NCBiotech led the project to bring this manufacturing operation to the state by securing partners for facility financing and state/local support to leverage $21M in federal funds. Medicago represents one of many emerging to mid-level biotechnology companies whose location and expansion challenges are best served by the sector-specific experience resident within NCBiotech. NCBiotech's economic development recruitment and expansion efforts have influenced commitments for 1,700 life science jobs in the past five years with potential direct annual economic impact of $1.2 billion and $60 million in state and local taxes
Results: Medicago opened its plant in 2011 with more than 50 employees and is continuing to hire North Carolinians to staff its expanding operations.

Innovation

Collaborative Funding Grant
Featured Partner: The Kenan Institute for Engineering, Technology and Science
How it's unique: These university/company research projects require a larger financial commitment than Kenan can commit to one program. With NCBiotech's dollars and support for administration and evaluation, Kenan can fund these partnerships.
Results: The Collaborative Funding Grant brings in nearly $70 in additional funding for every dollar granted. Other results include 194 patents, nearly 200 publications and four new companies.

Education and Partnership
NCBioImpact biomanufacturing worker training partnership
Featured partners: Industry (NCBIO Biomanufacturers Forum), UNC System, NC Community Colleges System, Golden LEAF, the General Assembly.
How it's unique: The state's growing manufacturing cluster needed specific training for workers. The above partners expanded and integrated biomanufacturing training in the state, aligning it with industry needs. Startup funds came from industry and Golden LEAF, and the General Assembly funds operating costs. NCBiotech administers and facilitates the group.
Results: North Carolina's worker training capabilities are consistently cited by Biogen, Eisai, Medicago, Merck, Novartis and others as advantages to doing business in North Carolina.

Other states
While it's important not to duplicate efforts within the state, the concept of a biotech center has been replicated by other state(s). Competitors include:

- Maryland created a biotech center to emulate NCBiotech. The center implements several company support programs modeled on our programs.
- Massachusetts also created a biotech center and, in 2007, launched a $1 billion life-science initiative. This includes $9 million annually to company loans and an SBIR matching program.
- Texas' Emerging Technology Fund invests in commercialization for multiple high-tech industries. The largest single sector of investment is biotech; from 2006 to 2011, the fund invested more than $100 million in 65 life-science companies.
- California has allocated $3 billion to stem cell research at its universities and research institutions. Since 2005, nearly $100 million of that funding has gone to biotech companies.

While North Carolina has the fastest job growth rate of top biotech states over the past decade, Massachusetts, Texas and California have grown at least twice as fast as North Carolina since 2008.

10. BUDGETARY IMPACT

Past budget reductions have hampered North Carolina's ability to stay ahead of the competition for biotech jobs. While our funding stagnated, other states put tens or hundreds of millions into biotech development. As noted above, other top states are now outpacing our job growth.

When possible, NCBiotech has brought in federal money, non-profit agency grants and corporate sponsorship to maintain program levels. We raise corporate sponsorships for most events, including the full cost of the N.C. pavilion at BIO. Because the bulk of our funding comes from the state, further cuts would create a negative impact for North Carolina. As detailed above, NCBiotech brings continuity across business, research, education and economic development programs. Without NCBiotech in the role of facilitator, no one entity would advocate for the life sciences.

Other states, which copied the North Carolina model, would seize this opportunity to recruit our small companies. Larger, manufacturing facilities could relocate, particularly if another state can match our workforce programs.

NCBiotech creates continuity across many partners; this continuity spurs the industry's growth here. Now, the larger life sciences industry sits at an inflection point in its growth curve. We strongly believe that a greater state commitment to NCBiotech will generate even more companies, growth, and jobs for North Carolina.