



NORTH CAROLINA BIOTECHNOLOGY CENTER



The North Carolina Biotechnology

Center saw a need to enhance the

commercialization of biotechnology research

in the state. The Centers of Innovation program

creates entities to accelerate commercialization

in areas of particular economic promise.

In addition to their technology-development

efforts, the Centers will coordinate commercial

opportunities and sector development.

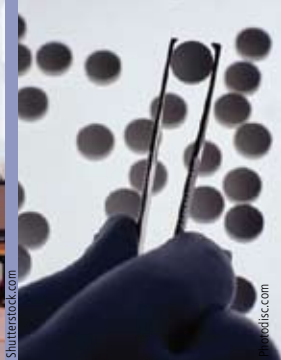
What is the Centers of Innovation Program?

In short, the Centers of Innovation are bringing together North Carolina's best scientific, technical and business minds in the life sciences to enhance economic development and job creation through the acceleration of commercialization.

The Biotechnology Center works with university researchers, technology transfer offices, industrial partners, nonprofit stakeholders as well as regional and statewide community leaders to establish Centers of Innovation (COI).

Built on a model of open innovation, regional biotechnology development will be driven by developing alliances between statewide research and industry. Targeting opportunities within well-defined industry sectors that benefit from the application of biotechnology will lead to the attraction and creation of companies, new business partnerships, jobs and increase federal- and corporate-sponsored funding for North Carolina university research in these sectors.

The investment provided over time to establish these Centers of Innovation is an investment in North Carolina's future.



The Mission

The goal of these centers is to maximize business opportunities by identifying and aligning industry needs with research potentially leading to invention disclosures, patents, industrial licenses and new company creation.

How it Works

Application is by invitation only. Potential applicants must demonstrate an established cohesive academic-industry consortium in order to receive an invitation to submit an application. Ongoing engagement of the Biotechnology Center staff is required.

A Center of Innovation will be funded in two phases.

Phase I Award

- A 12-month, \$100,000 planning grant allows the development of a business plan and organization plan. Phase I funding is a prerequisite for Phase II funding, although the award of a Phase I Center of Innovation planning grant does not guarantee that a Center of Innovation will be established.

Phase II Award

- This grant will award up to \$2.5 million over four years, allowing for the formal establishment of the COI and funds for the implementation and execution of the business plan.

Funded Programs

Four Centers of Innovation are working to align academic and industrial resources in biotechnology-dependent industries ideally suited for North Carolina's economic expansion. These Centers are in sectors with established strengths in North Carolina.

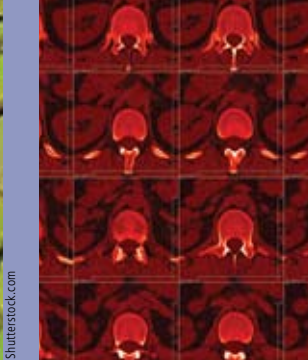
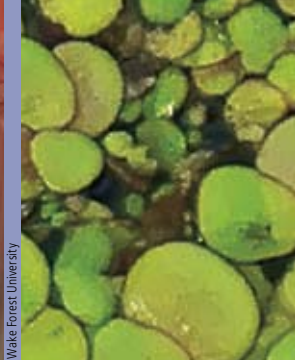
- Advanced Medical Technology
- Drug Discovery
- Marine Biotechnology
- Nanobiotechnology

Additional Centers of Innovation will be created to boost other industrial sectors that create opportunities for the people of North Carolina.

“One of the best options for recessionary times, and, some would argue, even in expansive times, is to join forces with another entity with complementary innovation goals.

Open innovation is about connecting with others to find new ideas and, often, to co-develop and co-market them.”

—Jeneanne Rae
Businessweek, 2008



Advanced Medical Technology

The Center of Innovation for Advanced Medical Technologies (AMT) will accelerate the growth of North Carolina's emerging medical technologies sector by promoting partnerships between companies and universities working in related technologies to:

- Improve access to AMT talent and services,
- Attract outside companies and investors to North Carolina, and
- Stimulate the creation of new AMT companies in North Carolina.

North Carolina is home to an emerging advanced medical technologies industry with the most exciting growth opportunities found in many existing early stage companies and those yet to be formed based on innovations at regional research centers.

In fact, between January 1999 and December 2006, advanced medical technology companies in the state collectively raised more than \$545 million in private and public equity from investors.



Drug Discovery

The Drug Discovery Center of Innovation will initially focus on oncology to maximize its impact. This aligns with the North Carolina General Assembly's commitment to cancer research through its \$50 million annual contribution to the University Cancer Research Fund.

This Center of Innovation intends to:

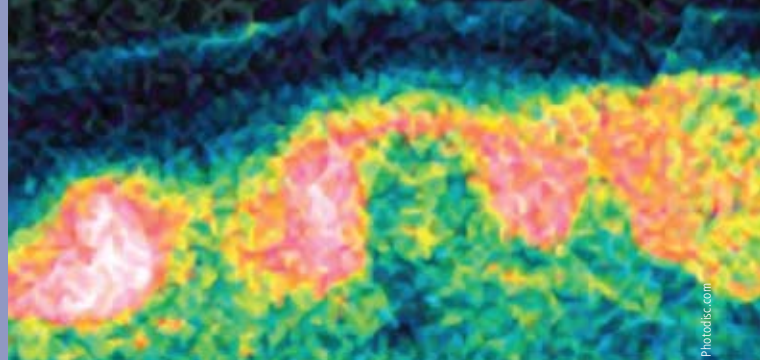
- Accelerate the development of new, safer drugs,
- Link cutting-edge research in North Carolina academic institutions with the needs of biotech and pharmaceutical companies, and
- Create a strategic network of drug development resources throughout the state.



Jamie Moncrief, Marbionc/UNCW



Jamie Moncrief, Marbionc/UNCW



Photodisc.com

Marine Biotechnology

The Marine Biotechnology Center of Innovation will serve as the focal point of marine biotechnology in North Carolina. The intent of this center is to:

- Bring together marine biotechnology-based services and innovation to meet the market needs of the COI's customers and partners,
- Create markets where none exist, and
- Contribute to the educational, economic and social development of the State of North Carolina and its residents through marine biotechnology.



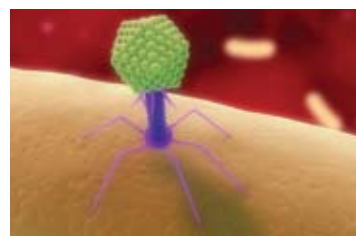
Jamie Moncrief, Marbionc/UNCW

North Carolina is home to several well-known marine science research institutes that conduct research in many different fields including oceanography, coastal and wetland studies, marine biomedicine, environmental physiology and marine biotechnology and aquaculture.

Nanobiotechnology

The mission for the Center of Innovation for Nanobiotechnology (COIN) is to leverage and connect public and private sector research communities, entrepreneurs, product developers, business managers, investors and funding sources involved in nanobiotechnology in North Carolina and beyond to:

- Accelerate the identification, development and commercialization of nanotechnology-based solutions that meet market needs in life science sectors where nanobiotechnology will add value,
- Create R&D collaborations, companies and new products to boost state economic growth, and
- Create and nurture an infrastructure that supports nanobiotechnology innovations.



Shutterstock.com



Benefits to North Carolina

Integrating these entities into a statewide network of industry-targeted resources will create an engine for driving innovation and commercialization. The Centers of Innovation will be uniquely positioned to create the win-win scenario for all stakeholders.

- Industry partners will have a connection with university research, which could provide them with a desired technology solution.
- Technology transfer offices will have a resource to help them with the challenges of developing and aligning early-stage technologies with specific industry need.
- Regional and state economic development partners will benefit from strengthening a high-tech industry sector leading to industry attraction, new company formation, jobs and wealth creation.



“Most companies continue to assume that innovation comes from that individual genius, or, at best, small, sequestered teams that vanish from sight and then return with big ideas. But the truth is most innovations are created through networks — groups of people working in concert.”

—Rob Cross, Andrew Hargadon, Salvatore Parise and Robert J. Thomas, *Wall Street Journal*, September 14, 2007



How Can You Participate?

For more information about participating in the Centers of Innovation, please visit our Web site: www.ncbiotech.org/COI

The North Carolina Biotechnology Center is a private, non-profit corporation supported by the N.C. General Assembly. Its mission is to provide long-term economic and societal benefits to North Carolina by supporting biotechnology research, business, education and strategic policy statewide.



North Carolina Biotechnology Center

Mary Beth Thomas, Vice President
Centers of Innovation Program
15 T.W. Alexander Drive, Post Office Box 13547
Research Triangle Park, NC 27709-3547
919-541-9366 • fax 919-549-8821

marybeth_thomas@ncbiotech.org

www.ncbiotech.org/COI

Offices in Asheville • Charlotte • Greenville
Research Triangle Park • Wilmington • Winston-Salem

NORTH CAROLINA BIOTECHNOLOGY CENTER

Centers of Innovation

The Commercialization of
Biotechnology in North Carolina

