

# NCBIOTECH | 2020 STRATEGY

The North Carolina Biotechnology Center devotes its state funding, expertise and other resources to a bold vision for North Carolina.

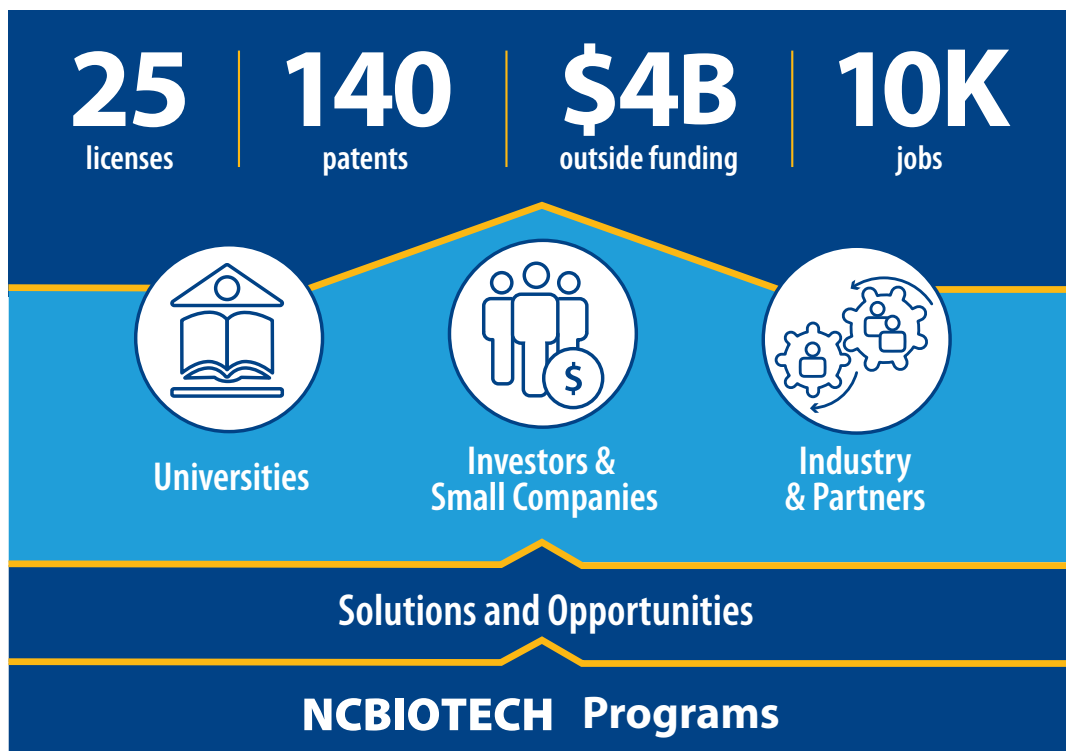
## Vision:

**North Carolina: a global life sciences leader**

## Mission:

We create North Carolina's competitive advantage in the life sciences, engaging partners, maximizing opportunities, and delivering solutions to accelerate innovation, investment, and job creation.

## 2021-2025 Outcomes:



# Defining Success

From a legacy of tobacco, textiles, and furniture, North Carolina has built a leading life sciences cluster. Its unusual diversity spans therapeutics, medical diagnostics, industrial biotech, crops, and other agriculture technologies. From the beginning, NCBiotech has served as the state's life sciences hub, leveraging state funding and relationships to accelerate technology, outcomes, and job growth. In 2020, the state's cluster had grown to 735 companies with 66,000 employees.

With the continued rapid growth of this sector, NCBiotech sees greater promise ahead for life sciences and for North Carolina. This document outlines how we'll get there – by applying our programs and expertise where sectors converge; by focusing on clear impacts; and by collaborating with partners to achieve a statewide vision for life sciences.

When we succeed, North Carolina will be an even stronger global life sciences leader in 2025.

## *Where we operate:*

Many organizations serve a tightly defined geographic area, while NCBiotech acts statewide. From its **Research Triangle Park** nucleus, biotechnology has spread to the **Piedmont Triad**, with strengths in regenerative medicine and a high concentration of research, testing and medical labs. The **Eastern** region of North Carolina is home to the BioPharma Crescent, a pharma manufacturing cluster that employs around 10,000. The **Southeast** region of the state expands its clinical research, industrial biotech and marine science innovation muscles, while the **Greater Charlotte** region accelerates its medical device, healthcare technology and nutritional research cluster. **Western** North Carolina has strength in natural products and has a new health innovation fund to invest in regional companies and technologies. These activities ensure that NCBiotech fulfills our statewide charge from the General Assembly.

## Measuring Our Impact

NCBiotech's activities prime the state's life sciences ecosystem for growth. We use the following impact criteria to direct activities and measure outcomes. These criteria inform our annual organizational goals, which direct unit and then individual goals. Further, these criteria link our activities to the 2025 statewide vision for life sciences (final section). A discussion of each criterion, our five-year target(s), and the strategies to achieve those targets follows.

North Carolina's universities generate the largest body of life sciences research in the state, creating a cornerstone of **innovation** for our ecosystem. NCBiotech grant funding generates remarkable value for the universities and the state. Historically, our grants have resulted in a 57X return in follow-on funding as well as dozens of patents, licenses, and startup companies. NCBiotech will continue to utilize its grant programs to advance timely and potentially disruptive innovations toward commercial development and economic impact. Between 2021 and

2025, NCBiotech's grant programs will enable awardee universities to achieve an additional \$900 million in follow-on funding, **140 patents** filed or issued, and **25 licenses** executed to companies.

Innovations spin out into companies, which require financial investment to thrive in North Carolina. Thus, the second impact criterion, early-stage **investments**, includes the financial resources available to North Carolina companies for developing innovations, creating companies, hiring a quality workforce, and developing products. NCBiotech provides a debt-financing program for small life sciences companies, which include university spinouts. Therefore funds are limited and designed to leverage additional, external funding critical for companies to achieve commercial milestones. Our goal is to generate **\$4 billion** in outside funding and also to increase expertise associated with those dollars to support life sciences companies in North Carolina.

The outcome of innovation and investment is **jobs**, which include positions created by recruiting, expanding and retaining life sciences companies; by supporting growth of start-up companies; by connecting companies to services that support their growth; and, by optimizing talent to match industry needs. By 2025, NCBiotech is aiming to support: 1) creation of the 4,705 jobs announced since 2016; 2) announcement of 4,800 additional jobs; 3) the portfolio companies whose payroll includes 2,200 annually. Within these targets, NCBiotech will target research and development, clinical research/testing, and advanced life sciences manufacturing. The **nearly 10,000 industry jobs** will ultimately create 13,766 indirect and 12,899 induced jobs, for a total of 36,170 jobs statewide.

Activities for innovation, investment, and jobs face myriad hurdles to growth, which NCBiotech works to overcome with connections across academic, government, and industry. Using our understanding of technology drivers

coupled with partner capabilities, NCBiotech targets and deploys processes that lower barriers to progress. These **solutions** fuel a vibrant ecosystem for North Carolina. By 2025, NCBiotech will clarify a consistent process for cataloging and prioritizing the solutions it provides for the life sciences ecosystem and begin to deliver one broad (across companies, sectors or geographies) and three targeted (focused on a single area or company) solutions per year, for a total of 20 solutions in five years.

Closely related to solving problems is creating **opportunities**. Knowledge gained through our foundational and outreach activity provides insight into areas that accelerate our life sciences ecosystem growth while leveraging North Carolina's assets. These opportunities create positive economic impact for the State. By 2025, NCBiotech will put in place the processes to identify and evaluate three opportunities per year (15 total), pursuing the ones that meet established criteria.

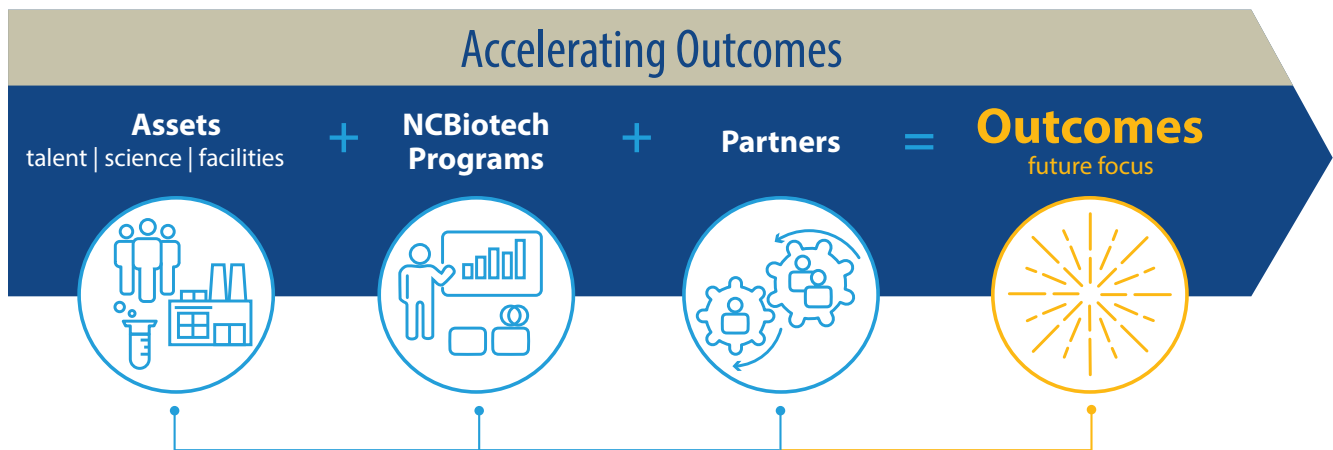
## NC's Competitive Advantage in Life Sciences

Early on, NCBiotech developed North Carolina's life sciences sector through a foundation of programs that boosted universities' research capabilities in the life sciences, progressed toward translation and company development, culminating in company expansion and recruitment efforts. The global life sciences industry continues to grow rapidly, often where previously unrelated areas of interest intersect. NCBiotech will expand and more tightly focus the application of its knowledge, experience and activities toward these emerging opportunities, accelerate outcomes, and grow NC's competitive advantage.

Each opportunity will have some basic criteria. North Carolina will already have assets, which may include

research, companies, talent and more. Assets may be clustered in a single region or spread statewide. The new market will have significant potential for creating jobs and economic impact. And, importantly, NCBiotech will be uniquely positioned to recognize their value and be able to facilitate collaboration among partners to develop the emerging opportunities into solutions for the state.

This approach leverages NCBiotech's value to differentiate North Carolina from competitive geographies and clusters. By discerning the opportunities where North Carolina can have the most impact, NCBiotech will catalyze the state's life sciences leadership.



# Resources to Achieve This Strategy and a Broader Vision

NCBiotech activities support an ecosystem that produces the above outcomes. The state has funded the Biotech Center continuously for nearly four decades, accelerating the growth of our life sciences cluster. Continued success in a more competitive environment requires sustained, and realistically increased, state funding. NCBiotech must also remain creative in attracting external revenues, including funds for project-based work that aligns with the mission.

Yet an ecosystem is not a single organization. Universities contribute scientific innovation, and, with the community colleges, train the next generation of life sciences workers. Small companies move research to products, connecting with investors for critical funding. Large companies create jobs, generate revenue, and drive the community forward. A bevy of support organizations statewide enrich North Carolina's life sciences leadership. NCBiotech works with these and more partners to highlight and meet the needs of a growing life sciences ecosystem.

These partnerships form the core of the North Carolina Life Sciences 2025 vision, a statewide plan to maximize North Carolina's life sciences assets and opportunities.

## Transformational Attributes

NCBiotech succeeds because of the expertise and dedication of its team. The team achieves results with five guiding principles, which we call transformational attributes.

- **Think Big**
- **Engage Partners**
- **Act Authentically**
- **Make it Count**
- **Seek the Greater Good**

**NCBIOTECH**

Working proactively and together, individuals, companies, communities, and locations will strengthen and grow this ecosystem.

This vision speaks to four areas:

- **Infrastructure** – North Carolina must pursue several paths to provide the unique, specialized facilities and services necessary to meet the growth needs of the life sciences.
- **Talent** – This core competitive advantage for North Carolina is under increasing pressure from a strong job market, anticipated job growth, and changing job skill profiles.
- **Investment** – The state's current cadre of entrepreneurial companies requires consistent investments to achieve commercial milestones. The goal is that they thrive in North Carolina.
- **Market Development and Attraction** – North Carolina's life sciences assets place it among the top life sciences clusters in the world. Identifying gaps in the market and communicating North Carolina's strengths and ability to fill those gaps will further develop the state's life sciences leadership.

It's a bold vision. We'll achieve it because of North Carolina's superior sciences, unmatched skill in biomanufacturing, world-leading clinical research capability, and entrepreneurial climate that launches breakthrough inventions. NCBiotech facilitates the many organizations that will dedicate resources – time, energy, and dollars – to achieve this vision. This level of cooperation and partnership is a hallmark of North Carolina's life sciences community.

The COVID-19 pandemic is creating opportunities and challenges, requiring even more cooperation and partnership. By coordinating activities across North Carolina's already strong institutions, organizations, and companies, NCBiotech can realize these opportunities, transforming North Carolina through life sciences.

## North Carolina Biotechnology Center

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