

Why North Carolina?

64,500+

employees



700+

life science
companies



88



international
companies

Source: NCBiotech Life Science Intelligence

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The transformation of North Carolina into a global life science leader is the product of a 35-year commitment. Public and private partners statewide wield a variety of incentives to grow the sector.

North Carolina is a globally competitive life science hub, home to more than 64,000 highly trained life science workers at more than 700 companies. We have what it takes to help companies launch and develop: world-class research universities; a skilled workforce; tremendous resources; and a business-friendly environment. This includes the North Carolina Biotechnology Center as a unique access point for life science companies of all sizes seeking to locate or expand. NCBiotech provides loans and other support. There are also various tax incentives available through the NC Department of Commerce (NCDOC), and guidance from the Economic Development Partnership of North Carolina (EDPNC).

The North Carolina Biotechnology Center

For 35 years NCBiotech has been a unique life science resource in transforming North Carolina into a global life science leader. We're staffed with specialists who can help established companies grow and help entrepreneurs convert ideas into companies through a continuum of funding programs and support services.

North Carolina Incentive Programs

North Carolina's targeted, performance-based incentive programs help companies that are locating and doing business in

North Carolina by lessening the tax burden and lowering overall costs to the company. NCDOC awards individual incentives based on a variety of metrics, including project location, jobs created, investment level and economic impact.

Tax Advantages Also Support Growth

- **Corporate Tax Rate:** North Carolina's 2.5 percent corporate income tax is the lowest rate of states that levy this tax.
- **Sales and Use Tax:** The state offers a number of sales and use tax exemptions. For example, in 2018 North Carolina significantly increased long-term business cost savings through single sales factor apportionment for multistate corporations. There are also exemptions for manufacturing machinery and related equipment, as well as raw materials, fuel, piped natural gas and electricity used for manufacturing. Other exemptions and credits are available for R&D and software publishing, pollution abatement equipment, recycling and historic preservation.
- **Property Tax:** In 2017, North Carolina had the 7th lowest commercial and 9th lowest industrial effective property tax rates in the country. Company inventories, recycling equipment and facilities used exclusively for recycling and resource recovery are exempt from property taxes.

North Carolina: knowledge, incentives, and a great quality of life



Creative Incentive Programs

Incentives provided by local units of government are key components of a broad incentives package that can help companies expand or relocate. Most are based on investment, anticipated taxes, and/or the number of jobs to be created. NCBiotech's Economic Development Award supports new job creation by bringing together community and industry partners. North Carolina also offers customized training programs through the state's excellent community college system, Golden LEAF Foundation grants, on-the-job training programs via NCWorks, as well as recruitment and applicant screening support.

Job Development Investment Grant

North Carolina's Job Development Investment Grants (JDIG) provide new and expanding companies cash to offset the cost of locating or expanding in the state. The JDIG lowers the effective cost of investment and positively contributes to a company's profitability. Grant amounts are based on location, number of jobs, and average salary. Funds are disbursed annually for up to 12 years and can be used for any purpose.

North Carolina offers life science companies an educated workforce, access to hundreds of life science companies and service providers, a well-established supply chain, and a creative and competitive landscape to support location costs and facility expansion. Ask NCBiotech how your company can tap into the state's vast resources.

North Carolina Biotechnology Center

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North Carolina: transforming ag with 21st century technology

100+

ag biotech
companies in
North Carolina



9,000+

North Carolinians
work in
ag biotech
companies



48

ag biotech companies
founded or relocated
to North Carolina
since 2010



NCSU/Roger Winstead

R&D at universities and 100+ ag tech companies boost North Carolina's \$87 billion ag sector with innovations in plant and animal production.

North Carolina is a place where agricultural tradition and 21st century science meet to create unmatched research and business opportunities. Here, virtually any ag tech company, researcher, investor or holder of intellectual property will find unique opportunities for transforming ideas into products. NCBiotech has led this transformation with a variety of activities, including the awarding of 407 ag-related grants and 44 loans totaling nearly \$25 million.

We have more than 100 ag biotech companies across North Carolina, and hundreds of world-class ag scientists, including global thought leaders working in our colleges and universities.

Agriculture contributes some \$87 billion a year to North Carolina's economy—about 17 percent of the state's income. About 17 percent of N.C.'s workforce is involved in some aspect of agriculture—more than 9,000 in our ag biotech companies. North Carolina offers wide-ranging research and field trials at 18 research stations statewide. It's also home to a 58-campus community college system and two land-grant universities: **North Carolina State University** in Raleigh and **North Carolina Agricultural and Technical State University** in

Greensboro. NCSU houses the **College of Agriculture and Life Sciences**, one of the largest of its kind in the nation.

The **NCSU College of Veterinary Medicine**, the state's only vet school, is ranked among the top three in the nation by U.S. News & World Report.

- NCBiotech established an initiative in 2010, now called the **Ag Sector Development** unit, to stimulate the growth of agricultural technology statewide. Since then, the sector has had a 20 percent growth in employment.
- Every \$1 we've invested in ag-related grants yields \$57.30 in additional funding, and every \$1 invested in ag-related loans yields \$287 in additional funding.
- **30 percent** of our ag biotech companies have been founded or relocated to the state since 2010.

The sector includes the North American headquarters of international giants **BASF Plant Science**, **Novozymes** and **Syngenta**. And awesome ideas keep cropping up as emerging companies, such as those outlined on the next page of this flier.

North Carolina is a global leader in transformative agricultural technology



North Carolina is home to some **creative new approaches** to bootstrap agricultural technology startups:

A group of investors joined forces in 2016 to create the **AgTech Accelerator** corporation in Research Triangle Park. Patterned on similar ventures targeting biopharmaceutical companies, the AgTech Accelerator is designed to help establish, house, finance and mentor innovative ag tech companies.

Ag TechInventures (AgTI) is another Triangle agricultural technology accelerator. AgTI scouts and identifies promising agricultural technologies from university research labs, small companies and individuals. It then shares with its industry partners to select the best ones to spin out into start-up companies and supports them with leadership, administration, business development services and financial consulting.

Examples of North Carolina's ag tech start-ups include:

Advanced Animal Diagnostics, which develops and commercializes diagnostics to detect and manage disease states and the reproductive, nutritional and overall health status of production animals.

AgBiome, a 2013 spinout from the University of North Carolina at Chapel Hill, has raised over \$100 million from numerous investors, including the Bill and Melinda Gates Foundation. The RTP company uses the plant microbiome to identify and develop genetic traits that provide resistance to pests. Its Genesis platform screens trillions of microbes, millions of gene sequences and thousands of strains.

Elo Life Systems is the ag subsidiary of Precision BioSciences, using Precision's proprietary genome-editing platform for applications in crop improvement, animal genetics, industrial biotechnology and sustainable agriculture. It has an ongoing partnership with agricultural giant Cargill to reduce saturated fat in canola oil. Precision is a Duke University spinout.

Pairwise, a fast-growing young gene editing and plant technology company, has established its headquarters in the Research Triangle area to take advantage of North Carolina's historic strengths in agriculture, burgeoning expertise in gene editing, and its talented labor pool. Pairwise is leveraging the natural diversity in agricultural crops in new ways to address global food and health challenges.

*North Carolina's agricultural history and diversity are incorporating 21st century science.
Ask NCBiotech how we can help you transform your agricultural technology into a globally successful asset.*

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North Carolina: developing devices to meet global health needs

From medical engineering labs to global manufacturers of medical devices, North Carolina is rich in breakthrough technologies for diagnosing and treating medical conditions.

Drawing upon North Carolina's outstanding academic base, its world-renowned workforce, its welcoming business climate and a unique history of partnership and collaboration, NCBiotech has led the state's life science growth trajectory for well over three decades. And North Carolina's medical device companies have become an increasingly important part of the state's globally leading life science ecosystem.

Throughout North Carolina, medical device companies are leveraging the state's strong research universities and entrepreneurial ecosystem to develop technologies and tools for surgery, disease detection and improved healthcare effectiveness. Everything from nano-scale medical devices that can transport and deposit therapeutic molecules to large robotic systems that help surgeons create big changes through small incisions.

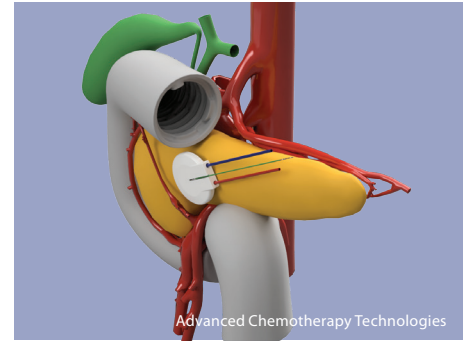
Our medical device industry includes large global enterprises such as **Cook Medical**, which employs 640 people at its growing endoscopy unit in Winston-Salem. The family-owned business founded in 1963 in Bloomington, Ind., sells minimally invasive medical devices in 41 medical specialties. The company makes 16,000 products that serve 13 hospital lines in 135 countries. Cook has 12,000 employees worldwide.

Durham-based hearing technology company **MED-EL USA** has become a global leader in hearing technology with its BONEBRIDGE bone conduction hearing implant system. It's the world's first and only active bone conduction hearing implant, widely considered a breakthrough in bone conduction technology. The device, first introduced in Europe in 2012, is for people 12 years and older who have been diagnosed with conductive hearing loss, mixed hearing loss, or single-sided deafness.

TransEnterix, based in Morrisville, develops robotics to improve minimally invasive surgery. The company's multi-port robotic system combines the advantages of robotic surgery with innovative surgical technology such as haptic feedback and eye-sensing camera control. In 2018, President and CEO Todd M. Pope was named one of Time magazine's 50 Most Influential People in Health Care.

TransEnterix was founded in 2006 by Synecor, a Chapel Hill business accelerator that spun out of **Duke University** in 2001 to commercialize medical device inventions.

North Carolina: building a diverse and exciting medical device ecosystem



Morrisville airway products company **Circassia** specializes in innovative asthma management products that are marketed directly to physician specialists. Recently, insurance provider AETNA deemed one of Circassia's key asthma products "medically necessary." The British company moved its U.S. headquarters to the Triangle with support from NCBiotech and other partners.

UVision360, in Raleigh, is changing the way gynecologists examine patients with its all-in-one gynecological system LUMINELLE DTx Hysteroscopy System. This system is a complete office-based system that allows for both diagnostic and operative hysteroscopy.

Durham-based **410 Medical** is attracting investors as it commercializes a new hand-operated device called LifeFlow, that allows health care providers to deliver fluids quickly and efficiently, improving care for patients with life-threatening conditions such as shock and sepsis. The product, conceived by WakeMed physician Mark Piehl, received FDA clearance for human use in 2016.

InnAVasc Medical of Durham is using a \$250,000 loan from NCBiotech to support a U.S.-based clinical study of its hemodialysis graft required for FDA and European Union

approval. The device, co-developed by a physician assistant and a vascular surgeon at Duke University, is an immediate-access graft that assures error-free cannulation (needle insertion) and reduces bleeding and perforation risks for hemodialysis patients.

Raleigh's **Advanced Chemotherapy Technologies** hopes to change the poor prognosis for pancreatic cancer patients by developing an implantable device to infuse chemotherapy drugs directly into the organ, targeting difficult-to-reach tumors while largely sparing surrounding tissues, organs and blood vessels. Scientists at the UNC School of Medicine are preparing the device for human trials.

Durham's **NeuroTronik** is a medical device company developing a novel neuromodulation therapy for patients suffering from acute decompensated heart failure.

Then there's **URO-1 Medical** of Winston-Salem. When the company needed help commercializing its device that works with endoscopes to allow precise injections of Botox into the bladder wall to treat overactive bladder, it received a \$250,000 NCBiotech loan and turned to **Novex Innovations**. The local contract development and manufacturing organization will test market, manufacture and ship the product, Repris, when it is fully commercialized in 2019.

*North Carolina's growing medical device sector is changing healthcare around the world.
The right location, in a strong ecosystem with skilled talent, can pay big dividends over time.
Let NCBiotech help you find the perfect place to transform your company.*

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