



## Life Sciences

### **Greensboro is Full of Life.**

The groundbreaking research and development conducted by Greensboro area biotech, pharmaceutical, and life sciences companies is a key reason North Carolina is recognized as the nation's third leading state for biotechnology.

Innovative pharmaceutical companies, laboratory testing facilities, and agricultural biotechnology firms are located throughout the Greensboro area. Supported by eleven colleges and universities, including two that are designated as having "High Research Activity"; the Joint School of Nanoscience and Nanoengineering at Gateway University Research Park; and a highly skilled labor force; Greensboro and the Piedmont Triad region are positioned as an ideal location for life science companies.

### **Smart People. Skilled People.**

Greensboro's skilled workforce has been built by innovation in higher education. North Carolina A&T State University and The University of North Carolina at Greensboro are both designated as institutions of "High Research Activity" by the Carnegie Foundation for the Advancement of Teaching. As a result, we are perfectly positioned to provide skilled employees and the latest in research support.

**North Carolina A&T State University** features research and academic study in bioengineering and biomedicine, including nanoengineering applications for drug delivery, reconstruction and regeneration; bioenergy; and a broad range of food science and nutrition areas, including functional foods and nutraceuticals.

**The University of North Carolina at Greensboro** offers programs ranging from nutrition and public health to chemistry and biochemistry. Research centers include the **Center for Drug Discovery**, with an emphasis on natural products drug design; the **center for Geographic Information Science and Health**; and the **Center for Biotechnology, Genomics, and Health Research**.

**Wake Forest University of Medicine** in Winston-Salem is ranked one of the nation's best medical schools by *U.S. News & World Report*. The school provides patient care, biomedical research, medical education, and service to the region. **The Wake Forest Institute for Regenerative Medicine (WFIRM)** is an international leader in the use of regenerative medicine to repair or replace diseased tissues and organs. WFIRM scientists were the first in the world to successfully implant a laboratory grown organ into a human and today are working to grow more than 22 different organs and tissues. Both entities operate under the auspices of Wake Forest University Baptist Medical Center.

### **Collaboration Breeds Innovation.**

Innovation requires collaboration, and critical resources are already in place in Greensboro and the Piedmont Triad to help life sciences companies thrive.

### **Gateway University Research Park**

North Carolina A&T State University and The University of North Carolina at Greensboro have partnered to establish Gateway University Research Park on two 75-acre campuses. Gateway URP provides state-of-the-art research facilities for work in life sciences, physical sciences, engineering, technology and other applied science areas.

### **The Joint School of Nanoscience and Nanoengineering (JSNN)**

Located at Gateway URP South Campus, the \$64 million JSNN offers Professional Master's and Ph.D. degrees in Nanoscience and is expected to offer M.S. and Ph.D. degrees in Nanoengineering in the future. The JSNN concentrates research activities on emerging trends in nanobiology, nanomaterials, nanometrology, nanobioelectronics and offers highly specialized teaching and research laboratory space using state-of-the-art technology and instrumentation.

### **Piedmont Triad Research Park (PTRP)**

This 200-acre research park currently offers 12 developed acres and 554,000 square feet of occupied space to life sciences-based companies, including **Targacept**, which is developing therapies for nervous system diseases and disorders. At full build out, PTRP will eventually provide 5.7 million square feet of laboratory, office, and mixed-use space in downtown Winston-Salem.

### **The Genomedical Connection**

This program works with physicians and patients in Greensboro to collect and use family history and genetic information in primary care. The information identifies patients at risk for diseases such as cancer and offers screening and treatments focused on disease prevention. The project is a partnership among The University of North Carolina at Greensboro, Moses Cone Health System, and Duke University Medical Center.

### **North Carolina Biotechnology Center**

The Piedmont Triad is home to the first regional office of the North Carolina Biotechnology Center, which is the world's first government-sponsored organization dedicated to developing the biotechnology industry.

### **Exceptional Training.**

The Greensboro region's colleges and technical schools provide excellent training for a superior workforce ready to excel in fields across the life sciences industry.

**Guilford Technical Community College(GTCC)** provides customized, industry-specific workforce training programs to help life science companies achieve a world-class workforce. Innovative biotechnology training is offered through the North Carolina Community College Systems's BioNetwork, a statewide initiative that provides specialized training, curricula, and equipment to develop a highly skilled biotechnology workforce. Through BioNetwork, GTCC also offers advanced technical and analytical training, including regulatory, validation, and technical writing training.

**Forsyth Technical Community College** offers the largest Biotechnology program in the state, with highly qualified instructors and state-of-the-art facilities to provide the training required of skilled laboratory technicians. The National Center for the Biotechnology Workforce (NCBW), located at Forsyth Tech, is an integral part of BioNetwork. The primary goal of the NCBW is to create out-of-state relationships and partnerships with compatible educational and training organizations for the biotechnology workforce.

**Alamance Community College** offers a biotechnology curriculum designed to meet the increasing demands for skilled laboratory technicians in various fields of biological and chemical technology.

### **A Highly Productive Workforce.**

A young, well-trained, and well-educated workforce in the Greensboro area provides life sciences companies with the human resources they need to be successful. Approximately 40,000 people in the Piedmont Triad are employed by the four major medical centers in the region – including Moses Cone Health System in Greensboro – or work in other life sciences-related occupations.

### **Cultivating Resources.**

The **Greensboro Partnership Entrepreneurship** Initiative connects companies at all stages of growth with the right resources. Featured programs include Capital Connects, which matches investors with entrepreneurs seeking investment capital, and a quarterly Life Sciences Roundtable networking event for executives.

The **Nussbaum Center for Entrepreneurship** is one of the largest small business incubators in the Southeast.

The **North Carolina Biotechnology Center**, the **Piedmont Angel Network (PAN)**, the **Small Business and Technology Development Center (SBTDC)**, and the **Inception Micro Angel Fund, LLC (IMAF) – Triad** offer access to capital.

The **North Carolina Biotechnology Center's** Triad office offers shared learning and intellectual exchange opportunities for senior executives.

The **North Carolina Entrepreneurship Center** facilitates entrepreneurship through the university community by leveraging the expertise of UNCG faculty, key area entrepreneurs, and specialty service providers.

## Agents of Change

<b>Company</b>	<b>Business Description</b>
Ameritox, Ltd. Greensboro	Pain prescription monitoring solutions
Banner Pharmacaps High Point	Gelcap technology
Spectrum Laboratory Network High Point	Full-service regional medical laboratory
Convatec Greensboro	Medical devices for ostomy and wound care
Cook Medical, Inc. Winston-Salem	Gastrointestinal endoscopy products
GBF, Inc. High Point	Medical packaging and test kits
LabCorp Burlington	Clinical and anatomical lab services
Merz Pharmaceuticals, LLC High Point	Specialty pharmaceuticals for dermatology
Mylan Pharmaceuticals, LLC Whitsett	Generic pharmaceutical products
Novartis Animal Health U.S. Inc. Greensboro	Veterinary pharmaceuticals
Pharmacore High Point	Custom synthesis and medicinal chemistry
Piedmont Pharmaceuticals LLC Greensboro	Drug development, especially in parasitology
Procter & Gamble Greensboro	Over-the-counter drug manufacturing
Qualicaps, Inc. Greensboro	Capsules and encapsulation equipment
Syngenta Crop Protection, Inc. Greensboro	Agricultural biotechnology
Targacept, Inc. Winston-Salem	Developing therapies for nervous system diseases and disorders
Tengion, Inc. Winston-Salem	New human tissue and organ generation
TransTech Pharma, Inc. High Point	Small molecule and protein therapeutics