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North Carolina's BioPharma Crescent: Fertile For Manufacturing

This five-county region in eastern North Carolina is home to biopharma firms from around the world.

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As a middle schooler, you may recall learning about the Fertile Crescent of the ancient world where the Tigris and Euphrates Rivers converged. As students we may not have comprehended the importance, but as adults we know that “location, location, location” and natural resources greatly impact world development. The unusually fertile soil of the Fertile Crescent, its productive water flow, and brackish marshes led to technological innovations like the wheel, writing, and advanced agriculture. The area has been called “The Cradle of Civilization” ever since.



(Image: BioPharma Crescent)

Everything BioPharma Needs for Manufacturing Success within 90 Miles

Much like the ancient fertile crescent, North Carolina has its own quarter moon of manufacturing known as the BioPharma Crescent — a five-county region located in Eastern North Carolina, midway between New York and Florida, and about halfway between Raleigh to the west, and the Atlantic Ocean to the east. This puts businesses and plants within a two-day truck drive to more than 200 million U.S. and Canadian consumers.

The Crescent is also less than one hour from North Carolina's famed Research Triangle Park, which is home to 600 life science companies. Highways connect Edgecombe, Johnston, Nash, Pitt, and Wilson counties to major consumer markets, international airports, and deep-water ports, making the area accessible to local, national, and international support.

Life-saving Technologies and Medications that Prolong the Journey and Improve the View

North Carolina's biopharma manufacturing sector, which includes biologics and pharmaceuticals, began in earnest in the early 1970s as research and development programs began to include commercial products. More than 50 years later, the BioPharma Crescent is leading the world in the development and manufacturing of life-changing technologies and medications. To facilitate ground-breaking change, the biopharma companies need a place where the conditions are ripe for success.

Biopharma companies headquartered in Germany, Spain, Switzerland, Denmark, and the U.S. have pinpointed the BioPharma Crescent to set down manufacturing roots, thanks to its location, natural resources, and neighboring companies who share their vision for success. Novartis, Merck, Pfizer, Novo Nordisk and Thermo Fisher, Catalent, Fresenius Kabi, Grifols, and Corning have all made the BioPharma Crescent a part of their manufacturing base.

"The BioPharma Crescent has a collection of leading pharma and biopharma manufacturing companies," said Bill Bullock, Senior Vice President of Economic Development and Statewide Operations at the North Carolina Biotechnology Center. "These companies recognized the area's many benefits, including the available talent, training infrastructure and highly collaborative business environment."

The scope of activity and expertise in the region is legendary. New capital investment has exceeded \$3 billion in recent years, a number that's expected to more than triple by 2025 due to expanding product lines and new FDA approvals. The region's biopharma expertise includes vaccines, cell-and gene-based therapeutics, monoclonal antibodies, RNA/DNA products, recombinant proteins, regenerative therapies, and industrial enzymes, and consumer and animal health products.

Thermo Fisher Scientific in Greenville, North Carolina is a one example of continual growth in the area. The biopharma powerhouse has 1.5 million square feet and continues to expand.

“It’s not just the physical space in the Crescent that allows for expansion, but how our biopharma and academic communities work together,” says Michelle Logan, VP, Drug Products Division, North America, at Thermo Fisher Scientific. “We nurture our partnerships around the North Carolina Biotechnology Center with programs designed to focus on workforce development. Through these programs we can take someone from another field like food or automotive manufacturing and teach them the fundamentals of pharma. This opens up a world of opportunity for people. The collaborative efforts of the community are just phenomenal.”

TOTAL GEOGRAPHICALLY-VARIABLE OPERATING COST RANKING	
BIOPHARMA INDUSTRY HUB TOTAL	ANNUAL OPERATING COSTS
NC I-95 Corridor, North Carolina	\$21,973,917
<i>Dublin, Ireland</i>	\$20,833,583
<i>Tel Aviv, Israel</i>	\$19,487,838
<i>Bangalore, India</i>	\$4,683,696

Source: The Boyd Company, Inc., 2023 BizCosts Benchmarks, Biopharma Industry Manufacturing Costs in 17 Global Benchmark Cities

Cost Effective Manufacturing

The economics of manufacturing in North Carolina’s BioPharma Crescent — land acquisition, labor costs, and energy have made the region attractive for creating and distributing product. Out of 17 national and international biopharma industry hubs, North Carolina’s BioPharma Crescent is ranked in the top four most cost-effective regions to manufacture along with Dublin, Tel Aviv, and Bangalore (*see table above*).¹

“Powering biopharma manufacturing in the region is a top priority for our public power communities,” says Carl Rees, Manager of Economic Development at Electricities of North Carolina. “Our member utilities offer 99.9 percent reliability at rates well below the average of what most European companies pay for electricity. This has proved to be a strong site location factor and has helped to attract overseas companies to the Crescent.”

A Growing Talent Pool Fuels the Crescent’s Employee Base

“The BioPharma Crescent spans about 90 miles,” says Chris Johnson, Director of Johnston County Economic Development. “Anyone driving on the interstate passes a major biopharma

manufacturing plant about every 20 minutes. The overwhelming concentration of biopharma companies positively affects the talent pool because people know they have employment choices if their lives and careers change,” adds Johnson. “If they accept a job in North Carolina, they know they’ll have options without having to uproot their lives again.”

One resource BioPharma Crescent companies share is the biopharma-specific training network that has the full support of local technical colleges.

“The commitment of our colleges and universities to upgrade their academic and training programs provides local businesses a highly educated, well-trained workforce,” says Johnson. “These new training programs helps attract and retain top talent. Five military bases in the area release 17,000 people a year who are ready to transition into the civilian workforce.”

The North Carolina BioPharma Crescent: Open for Business with Room to Grow

Whether companies are in the early stages of their search or further along the trajectory, North Carolina’s BioPharma Crescent is a region worth serious consideration. The area has the largest concentration of biopharma manufacturing on the east coast for many reasons — its location, human resources, available real estate, and a life science culture of over 50 years.

The region is a source of pride for North Carolinians, pharma industry employees, and citizens across the country who value innovation that prolongs and saves lives. The North Carolina BioPharma Crescent is a “must research, must see, must experience” endeavor for biopharma companies looking for their next manufacturing location. It’s somewhere they can grow, expand, and access the support of a 50-year successful, professional enclave.

Reference

¹ The Boyd Company, Inc., 2023 BizCosts Benchmarks, Biopharma Industry Manufacturing Costs in 17 Global Benchmark Cities