

The Great Things About the Southeastern United States and Biotechnology

Home to many of the world's top research corporations and universities, the Southeastern United States features a unique business environment rich in innovation, collaboration and talent dedicated to growing the life sciences industry. Often ranked as having the best overall quality of life in the nation, the Southeast attracts and sustains visionaries who contribute to the region's reputation as a life sciences stronghold.

Did you know that...

1. The Southeast has been ranked third in the nation in biotech, as measured by the number of public and private companies working in biotechnology.

- ◆ The region includes more than 30 public biotech companies and more than 200 private biotech companies.
- ◆ North Carolina (#3), Georgia (#7) and Florida (#10) are among the top ten U.S. biotech centers, according to Ernst & Young's *Beyond Borders: The Global Biotechnology Report 2006*

2. Industry has spawned new products from Gatorade™ to 3TC and FTC. Select market achievements include:

- ◆ Gatorade™ - heat exposure (University of Florida) UF has received \$130M plus in royalties to date from Gatorade™.
- ◆ Trusopt – glaucoma treatment (University of Florida) UF has received \$180M plus in royalties to date from Trusopt.
- ◆ 3TC and FTC – for the treatment of AIDS (Emory University) - Constitute the lion's share of AIDS treatment prescribed today. In addition, Emory sold its future royalties in FTC last summer for a one-time payment of \$520M, the world's largest such deal.
- ◆ Myozyme - Pompe's Disease (Duke University) Duke is expected to receive \$8-10M in royalties a year.
- ◆ Taxol – ovarian and breast cancer treatment (discovered in cooperation with NCI and the Research Triangle Institute; commercialized by Bristol-Meyers Squibb)
- ◆ Synthetic Taxol – a cheaper and semi-synthetic version to treat ovarian and breast cancer (Florida State University) - This earned FSU \$350M in royalty payments.
- ◆ Pioneered the protocol for chemotherapy commonly used in treating cancer patients: discovered five of the FDA-approved drugs to combat cancer and protect against the side effects of treatment. (University of Alabama at Birmingham/Southern Research Institute)
- ◆ BAND-AID® Brand Liquid Bandage and DERMABOND Topical Skin Adhesive – developed by Raleigh-based Closure Medical
- ◆ FUZEON – first in a class of anti-HIV drugs called fusion inhibitors, developed by RTP-based Trimeris, in collaboration with Roche
- ◆ In Ovo Technology – an approach to poultry disease prevention developed by RTP-based Embrex

3. The Southeast is home to:

- ◆ Joint U.S. headquarters of world's 2nd largest pharmaceutical company (GlaxoSmithKline, Research Triangle Park, NC)
- ◆ 20% of the total biotech companies in the US that went public in 2005
- ◆ \$300M manufacturing facility for the world's 3rd largest pharmaceutical company (Merck, Durham, NC)
- ◆ Manufacturing facilities for Ajinomoto (Raleigh, NC); Biogen Idec (Research Triangle Park, NC); Diosynth Research Triangle Park, NC); DSM (Greenville, NC); Novartis Vaccines Plant (Holly Springs, NC), and Novartis Animal Health US Plant (Greensboro, NC); Novozymes (Franklinton, NC); Talecris (Clayton, NC); Wyeth Vaccines Plant (Sanford, NC)

- ◆ U.S. headquarters for two major European pharmaceutical companies, UCB Inc., the 5th largest biopharmaceutical company in the world in Smyrna, GA, and Solvay Pharmaceuticals in Marietta, GA.
- ◆ \$260M manufacturing facility for the world's largest privately held pharmaceutical company, Boehringer Ingelheim (Petersburg, VA)
- ◆ Eli Lilly and Company's new \$425M insulin manufacturing center (Prince William County, VA)
- ◆ DuPont Tate & Lyle BioProducts fabric plant, when operational the plant will be one of the largest biotech production facilities in North America (Loudon County, TN)
- ◆ Global headquarters for the largest animal healthcare products company in the world (Merial, a \$2 billion a year joint venture between Merck & Co. and France-based Sanofi-Aventis, Duluth, GA)
- ◆ Public companies such as AtheroGenics, BioMimetic Therapeutics, Cryolife, Emageon, Icagen, Inhibitex, Inspire Pharmaceuticals, King Pharmaceuticals, NABI, Pozen, Targacept, Theragenics, and Trimeris

4. One of the largest advantages the Southeast has in biotech is its world renowned research universities. Universities such as Duke University, Georgia Institute of Technology, the University of Alabama at Birmingham, the University of Florida, Vanderbilt University, the University of North Carolina at Chapel Hill, Emory University, the University of Georgia, North Carolina State University and the University of South Florida conduct extensive research and are focused on commercialization. In 2004, *\$4.6 billion in total sponsored research* was reported by Southeastern universities in the AUTM Licensing Survey.

5. Notable research centers and institutions based in the region include:

- ◆ American Cancer Society (Atlanta, GA)
- ◆ The Burnham Institute for Medical Research (Orlando, FL)
- ◆ The Carter Center (Atlanta, GA)
- ◆ Fitzpatrick Center for Interdisciplinary Engineering, Medicine and Applied Sciences at Duke University (Durham, NC)
- ◆ Howard Hughes Medical Institute (Loudon County, VA)
- ◆ Mayo Clinic facility (Jacksonville, FL)
- ◆ H. Lee Moffitt Cancer Center and Research Institute (Tampa, FL)
- ◆ National Center for the Biotechnology Workforce, Forsyth Technical Community College (Winston-Salem, NC)
- ◆ National Institute for Environmental Health Science (Research Triangle Park, NC)
- ◆ Oak Ridge National Laboratory (Oak Ridge, TN)
- ◆ RTI International (Research Triangle Park, NC)
- ◆ Sarah Cannon Research Institute (HCA) (Nashville, TN)
- ◆ Scripps Florida (Palm Beach, FL)
- ◆ Southern Research Institute (Birmingham, AL)
- ◆ St. Jude's Children's Research Hospital (Memphis, TN)
- ◆ Torrey Pines Institute for Molecular Studies (Port St. Lucie, FL)
- ◆ UNC Lineberger Comprehensive Cancer Center (Chapel Hill, NC)
- ◆ US Centers for Disease Control and Prevention (Atlanta, GA) (The world's largest public health research center, the CDC employs 6,000 in Georgia and has an annual budget of \$7 billion.)
- ◆ Vanderbilt Ingram Cancer Center (Nashville, TN)
- ◆ Yerkes Primate Research Center (Atlanta, GA)
- ◆ National Science Foundation (Arlington, VA)
- ◆ Virginia is home to fourteen federal R&D facilities, including Langley Research Center and the new Homeland Security Institute.

6. **The Southeast is home to the world's first research park – Research Triangle Park** (opened in 1959), the **nation's first biotechnology center** (founded in North Carolina in 1981), and the nation's oldest and **largest entrepreneurial support organization** – the **Council for Entrepreneurial Development** (founded in Research Triangle Park in 1984).

- ◆ The Southeast is also home to the 2nd largest research park in the U.S., the Cummings Research Park in Huntsville, AL, and a new \$1 billion biotech research park currently being built in Kannapolis, NC.

7. **Total workforce in the life sciences industry** in the Southeast according to the Biotechnology Industry Organization is 138,093.

8. **Venture Capital Funding -**

Large regional funds with a life sciences focus include *HIG Ventures (Miami, FL), managing over \$3.0 billion, Intersouth Partners (Durham, NC), managing \$780 million, Noro-Moseley Partners (Atlanta, GA), managing \$580 million, Pappas Ventures (Research Triangle Park, NC), managing \$230 million, and the Aurora Funds (Durham, NC), managing \$200 million.*

The Southeast has more than **20 active angel groups**, including Charleston Angel Partners, Emergent Growth Fund, New World Angels, Piedmont Angel Network, Springboard Capital, StartUp Florida, and the Wilmington Investor Network.

9. **Quality of life**

- ◆ Disney World (Orlando, FL) and Country Music Hall of Fame and the Grand Ole Opry (Nashville)
- ◆ World's Largest Aquarium (Georgia Aquarium)
- ◆ Elite professional sports teams including the Atlanta Braves, Atlanta Falcons, Carolina Hurricanes (2006 Stanley Cup Winner), Carolina Panthers, Charlotte Bobcats, Florida Marlins, Miami Dolphins, Tampa Bay Buccaneers (2002 Super Bowl Champs), Tennessee Titans
- ◆ The world's busiest airport, the Hartsfield-Jackson Atlanta International Airport, with close to a million landings and takeoffs a year
- ◆ US headquarters for Delta (Atlanta) and US Airways (Charlotte, NC)
- ◆ Headquarters of CNN (Atlanta)
- ◆ Some of the best golf courses in the country including Augusta National; Pinehurst, home of the 2005 U.S. Open; Sawgrass; and the Blue Monster at Doral.
- ◆ Blue Ridge Mountains/Parkway, Biltmore Estate (Asheville, NC)
- ◆ Home to historic cities such as Charleston, SC, Savannah, GA, Williamsburg, VA
- ◆ Some of the world's best beaches

9. **Interesting rankings:**

- a) Top 200 Best Places in Nation for Business and Careers (Forbes 2006)

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|------------------|--------------------|
| #2 Raleigh, NC | #8 Durham, NC |
| #5 Knoxville, TN | #14 Huntsville, AL |
| #7 Nashville, TN | #15 Atlanta, GA |
- b) Metro Area for Biotechnology & Life Science (Miliken Institute 2004)

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|-----------------------------------|
| #3 Raleigh-Durham-Chapel Hill, NC |
| #6 Washington, DC |
- c) #5 Best Place to Live – Cary, NC (Money 2006)
 Hottest Cities for Business Expansion and Relocation Expansion Management 2006)

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| #1 Nashville, TN |
| #3 Atlanta, GA |

 #3 Top City with the Most Fortune 500 Headquarters – Atlanta, GA (Fortune 2006)

- d) #1 in PhD's per capita among U.S. Innovation-based regions – Research Triangle Park (U.S. Census 2000 data)
- e) #5 Best Overall University in Nation – Duke University (US News 2006)
 #2 Best Public University in Nation – University of Virginia (US News 2006)
 #5 Best Public University in Nation – University of North Carolina at Chapel Hill (US News 2006)
 Four of the nation's top 20 business schools (US News 2007 Ranking)
 Duke #11, University of Virginia #13, Emory #18, UNC-Chapel Hill #20
 Three of the nation's top medical schools
 UNC-Chapel Hill #2 in primary care, East Carolina University #6 in primary care (tie)
 & Duke #6 in research and #6 in primary care
 #1 Most Entrepreneurial Campus in nation – UNC-Chapel Hill (Forbes 2004)
- f) #3 Best Public School System in Nation – Wake County, NC (Forbes 2004)
- g) “Best States for Business” (Chief Executive Magazine 2006)
 #3 North Carolina, #4 Florida, #5 Georgia, #7 Virginia
 “Ten Hot Cities for Job Growth” (CNN Money.com/Business 2.0 2006)
 #6 Jacksonville, FL; #7 Tampa, FL; #9 Charlotte, NC; #10 Atlanta, GA
 50 Smart Places to Live (Kiplinger's 2006)
 #1 Nashville, TN; #4 Atlanta, GA; #7 Asheville, NC

- h) **Cost of living:**
 A little bit of your money will go a long way in the Southeastern United States, where the cost of living is low and the quality of life is high. The Southeast BIO footprint covers a geographically diverse seven-state region, and cost of living index figures for some Southeast locations compared with other U.S. cities are shown below. (The national average is set at “100”).

Cost of Living Index

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|------------------------|--------------------------------|
| Atlanta, GA (97.5) | Boston, MA (133.6) |
| Charleston, SC (99) | Gaithersburg, MD (132.7) |
| Gainesville, FL (92.6) | Houston, TX (90.2) |
| Huntsville, AL (91.1) | Los Angeles, CA (158.2) |
| Knoxville, TN (88.1) | Middlesex-Monmouth, NJ (132.5) |
| Raleigh, NC (93.1) | Philadelphia, PA (124) |
| Richmond, VA (101.1) | San Francisco, CA (170.6) |

The average home price in Raleigh, NC is \$223,000 compared to \$873,000 in San Francisco, CA. The average home price in Atlanta, GA is \$293,000 compared to \$495,000 in Boston, MA. The average home price in Gainesville, FL is \$260,000 compared to \$569,000 in Gaithersburg, MD.

- i) **Cost of doing business:** According to the Miliken Institute 2005 Report, the cost of doing business in the Southeastern states is below the national average with South Carolina 44th (16 percent below), Alabama 40th (14 percent), Tennessee 39th (14 percent), Georgia 31st (8 percent) North Carolina 30th (8 percent) Virginia 24th (5 percent), and Florida 22nd (4.9 percent).
- j) **Bouncing bonus:** 3 of last 5 NCAA Men's Basketball Champions
 2006 – University of Florida, 2005 – UNC Chapel Hill, 2001 – Duke University