

North Carolina



North Carolina's bioscience industry is large, growing, and highly specialized with a diverse set of niche strengths. The state industry employed more than 66,000 in 2012 while operating 2,881 business establishments. The concentration of employment in the bioscience industry is 41 percent greater across North Carolina's economy relative to the national average—its location quotient is 1.41. The state has a specialization in three of the five major subsectors—drugs and pharmaceuticals, agricultural feedstock and chemicals, and research, testing, and medical labs. Statewide, the bioscience industry had 7 percent job growth from 2007 to 2012, with three subsectors contributing gains. North Carolina is among the top tier across all states in key measures of bioscience R&D and innovation including in academic R&D, NIH research funding, and venture capital investments. State bioscience firms have seen an increase in VC funding in recent years and since 2009 have received \$1.2 billion in investments.

Bioscience Performance Metrics

Summary of State Performance in Selected Bioscience-related Metrics

Metric	North Carolina	United States	Quintile
Bioscience Industry, 2012			
Bioscience Industry Employment	66,123	1,619,746	I
Bioscience Industry Location Quotient	1.41	n/a	I
Bioscience Industry Establishments	2,881	73,088	I
Academic Bioscience R&D Expenditures, FY 2012			
Bioscience R&D (\$ thousands)	\$1,999,230	\$38,139,876	I
Bioscience Share of Total R&D	76%	61%	I
Bioscience R&D Per Capita	\$203	\$119	I
NIH Funding, FY 2013			
Funding (\$ thousands)	\$1,037,787	\$22,293,255	I
Funding Per Capita	\$105	\$70	I
Bioscience Venture Capital Investments, 2009–13 (\$ millions)	\$1,242.0	\$49,401.7	I
Bioscience and Related Patents, 2009–13	2,986	100,238	II

State ranking figures for bioscience performance metrics are calculated as quintiles, where I = top quintile, III = middle quintile, and V = bottom quintile.

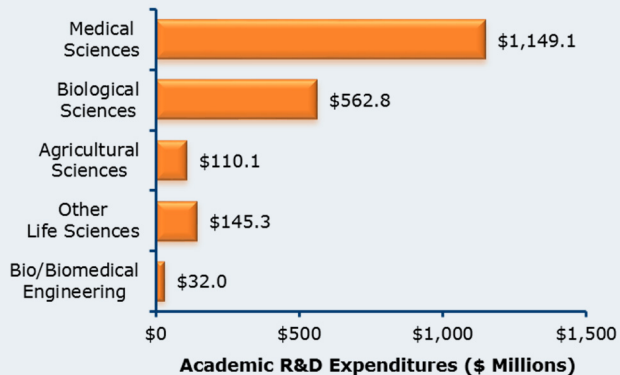
For source notes, see end of State Profile.

Industry Subsector	North Carolina		United States	
	2012	2007–2012 Change	2012	2007–2012 Change
Agricultural Feedstock & Chemicals				
Establishments	51	28.1%	1,772	5.2%
Employment	3,271	-0.9%	76,404	-1.0%
Location Quotient	1.48		n/a	
Direct-Effect Employment Multiplier	17.3		18.1	
Total Employment Impact	56,565		1,382,637	
Average Annual Wage	\$87,273	18.1%	\$75,828	14.2%
Bioscience-Related Distribution				
Establishments	1,319	37.3%	36,793	1.4%
Employment	13,409	-14.0%	442,016	-3.9%
Location Quotient	1.04		n/a	
Direct-Effect Employment Multiplier	2.7		2.7	
Total Employment Impact	36,708		1,199,015	
Average Annual Wage	\$79,366	28.1%	\$85,188	11.5%
Drugs and Pharmaceuticals				
Establishments	110	37.5%	3,057	12.0%
Employment	20,946	8.9%	284,331	-10.9%
Location Quotient	2.54		n/a	
Direct-Effect Employment Multiplier	10.1		9.9	
Total Employment Impact	210,916		2,673,265	
Average Annual Wage	\$90,115	1.1%	\$106,576	13.9%
Medical Devices and Equipment				
Establishments	198	27.7%	7,235	12.0%
Employment	8,854	20.4%	349,432	1.4%
Location Quotient	0.87		n/a	
Direct-Effect Employment Multiplier	3.4		3.9	
Total Employment Impact	30,517		1,318,459	
Average Annual Wage	\$55,140	8.2%	\$75,695	10.7%
Research, Testing, and Medical Laboratories				
Establishments	1,203	102.4%	24,231	31.0%
Employment	19,643	20.5%	467,563	9.7%
Location Quotient	1.45		n/a	
Direct-Effect Employment Multiplier	2.8		2.7	
Total Employment Impact	54,495		1,284,196	
Average Annual Wage	\$85,655	18.6%	\$91,248	15.9%
Total Bioscience Industry				
Establishments	2,881	57.4%	73,088	11.4%
Employment	66,123	7.0%	1,619,746	-0.4%
Location Quotient	1.41		n/a	
Direct-Effect Employment Multiplier	5.7		4.9	
Total Employment Impact	379,656		7,857,572	
Average Annual Wage	\$81,786	12.9%	\$88,202	12.8%
Total Private Sector				
Establishments	250,607	2.5%	8,699,564	-0.5%
Employment	3,223,192	-4.9%	111,137,206	-3.1%
Average Annual Wage	\$43,028	11.4%	\$49,130	11.1%

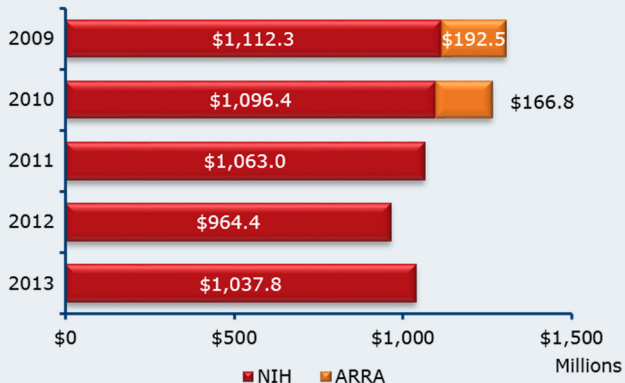
Note: U.S. employment metrics include Puerto Rico. Estimates of total impacts do not include Puerto Rico.

Bioscience Research in North Carolina

Bioscience Academic R&D Expenditures, FY 2012



NIH Awards, 2009–2013

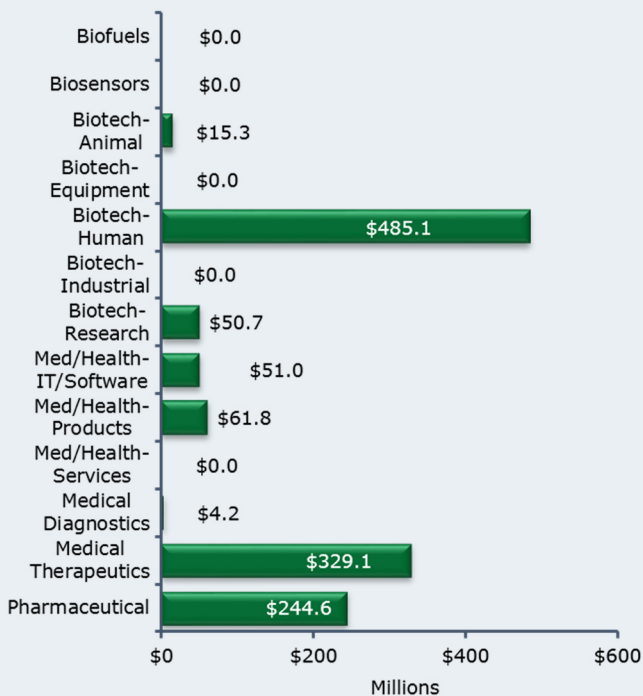


Bioscience Venture Capital in North Carolina

Bioscience-Related Venture Capital Investments, 2009–2013

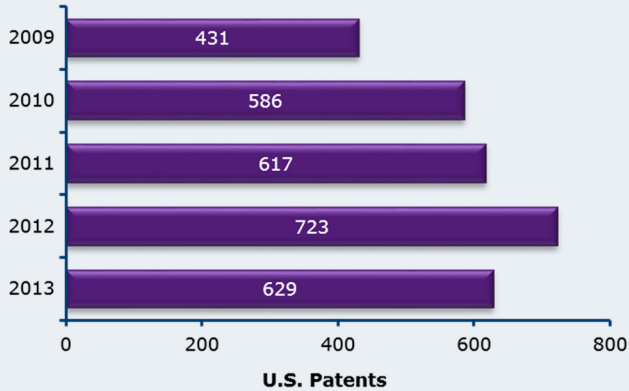


Bioscience-Related Venture Capital Investments by Segment, 2009–2013

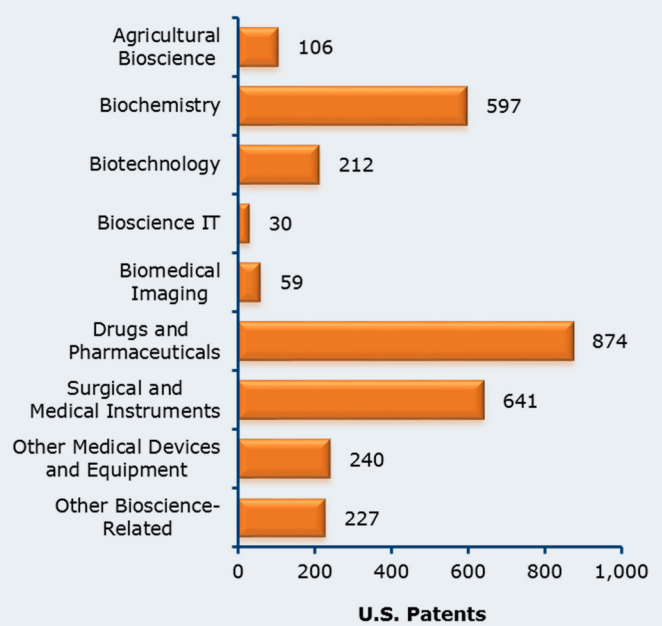


Bioscience Patents in North Carolina

Bioscience-Related Patents, 2009–2013



Bioscience-Related Patents by Segment, 2009–2013



Source Notes

Employment, Establishments, and Wages: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW), enhanced file from the IMPLAN Group, LLC.

Employment Multipliers: IMPLAN Group, LLC state-level Input/Output models.

Academic R&D Expenditures: National Science Foundation (NSF) Higher Education Research and Development (HERD) Survey.

NIH Funding: National Institutes of Health, *NIH Awards by Location & Organization* (summary information within RePORT database), and NIH-managed funding for FY 2009 and FY 2010 from the American Recovery and Reinvestment Act (ARRA) website.

Venture Capital: Thomson Reuters Thomson ONE venture capital database.

Patents: U.S. Patent & Trademark Office data from Thomson Reuters Delphion Patent Analysis Database.

For a more detailed discussion of the data and methodology used, please see the Appendix to the full national report.