North Carolina

The U.S. Bioscience Industry: Fostering Innovation and Driving America's Economy Forward

North Carolina's bioscience industry is among the national leaders in its size, specialized employment concentration, and diverse strengths. The industry has experienced strong growth in the state since 2018, increasing its employment by 13 percent to reach more than 92,000 jobs in 2021 across 5,863 business establishments. Four of North Carolina's five industry subsectors contributed to the overall job gains. North Carolina has diverse strengths in the biosciences, with specialized employment concentrations in two subsectors—pharmaceuticals and research, testing and medical labs. Two other subsectors have high, above-average concentrations in the state—agricultural feedstock and industrial biosciences and bioscience-related distribution. The state is among the top tier in its bioscience-related university R&D activities with $2.5 billion in expenditures in 2020. Funding from NIH to North Carolina institutions has been steadily and significantly increasing in recent years and reached $2.2 billion in 2021.

Bioscience Performance Metrics

Summary of State Performance in Selected Bioscience-related Metrics

Metric	North Carolina	United States	Quintile
Bioscience Industry, 2021			
Bioscience Industry Employment	92,223	2,135,704	I
Bioscience Industry Location Quotient	1.39	n/a	I
Bioscience Industry Establishments	5,863	127,389	I
Academic Bioscience R&D Expenditures, FY 2020			
Bioscience R&D ($ thousands)	$2,493,783	$51,108,737	I
Bioscience Share of Total R&D	77%	63%	I
Bioscience R&D Per Capita	$238	$154	I
NIH Funding, FY 2021			
Funding ($ thousands)	$2,224,334	$34,751,109	I
Funding Per Capita	$211	$105	I
Bioscience Venture Capital Investments, 2018-21 ($ millions)	$2,675.61	$197,674.54	II
Bioscience-Related Patents, 2018-21	3,922	153,072	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.

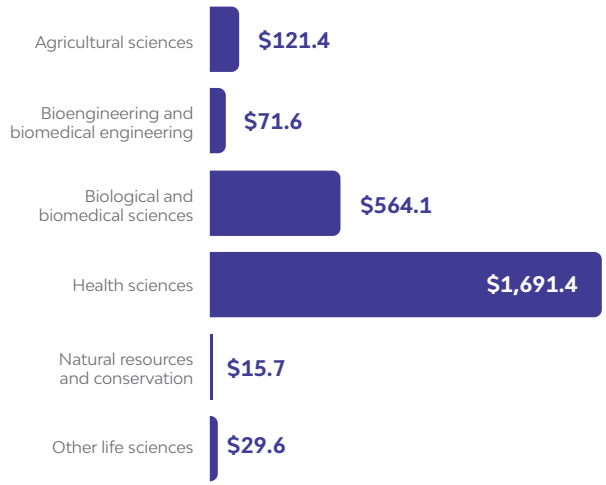
Industry Subsector		North Carolina		United States	
		2021	2018–2021 Change	2021	2018–2021 Change
Agricultural Feedstock and Industrial Biosciences	Establishments	49	14.1%	1,948	10.0%
	Employment	2,482	0.7%	69,573	1.9%
	Location Quotient	1.15		n/a	
	Average Annual Wage	$109,301	17.6%	$91,989	13.1%
Bioscience-Related Distribution	Establishments	2,528	27.5%	62,697	14.7%
	Employment	20,473	15.2%	602,589	6.6%
	Location Quotient	1.09		n/a	
	Average Annual Wage	$118,681	14.6%	$121,606	15.0%
Medical Devices and Equipment	Establishments	186	-3.4%	10,268	17.4%
	Employment	8,258	-3.4%	398,847	5.5%
	Location Quotient	0.67		n/a	
	Average Annual Wage	$72,324	2.9%	$98,481	8.7%
Pharmaceuticals	Establishments	130	7.2%	5,973	34.7%
	Employment	23,967	10.4%	344,839	11.9%
	Location Quotient	2.24		n/a	
	Average Annual Wage	$104,160	4.9%	$126,153	10.3%
Research, Testing, and Medical Laboratories	Establishments	2,971	56.4%	46,503	34.5%
	Employment	37,042	19.6%	719,856	19.3%
	Location Quotient	1.66		n/a	
	Average Annual Wage	$122,390	19.3%	$147,396	22.0%
Total Bioscience Industry	Establishments	5,863	38.3%	127,389	22.3%
	Employment	92,223	13.2%	2,135,704	11.0%
	Location Quotient	1.39		n/a	
	Average Annual Wage	$111,993	14.0%	$125,750	16.4%
Total Private Sector	Establishments	307,165	13.7%	10,665,643	9.3%
	Employment	3,828,795	3.2%	123,376,557	-1.5%
	Location Quotient	1.00		n/a	
	Average Annual Wage	$60,083	18.2%	$67,826	18.9%

Note: U.S. employment metrics include Puerto Rico.

Bioscience Research in North Carolina

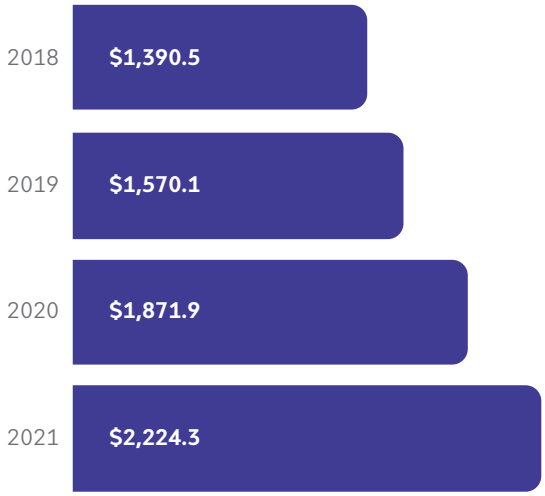
Bioscience Academic R&D Expenditures

$ Millions, FY 2020



NIH Awards

$ Millions, FY 2018-2021



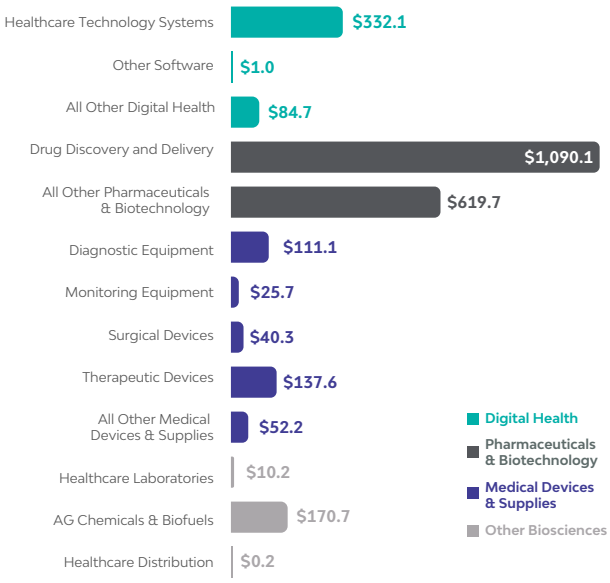
Bioscience Venture Capital in North Carolina

Bioscience-Related Venture Capital Investments

$ Millions, 2018-2021

Bioscience-Related Venture Capital Investments by Segment

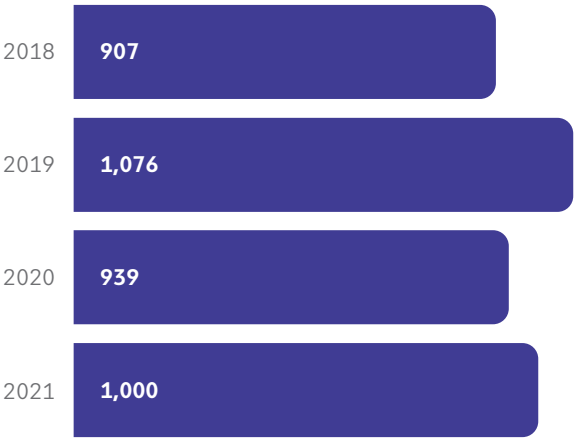
$ Millions, 2018-2021



Bioscience Patents in North Carolina

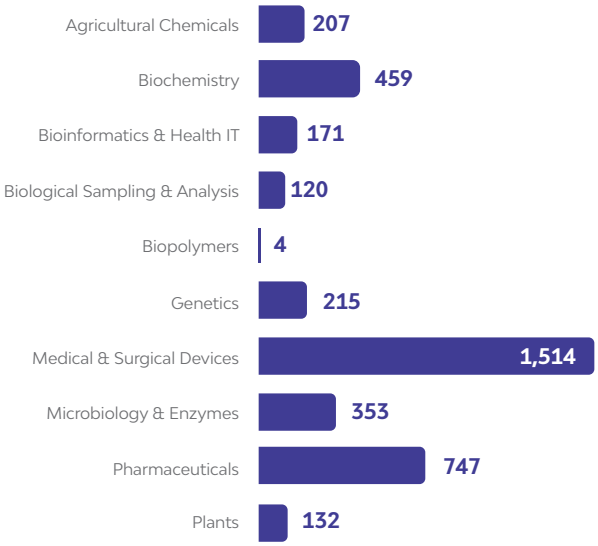
Bioscience-Related U.S. Patents

2018-2021



Bioscience-Related U.S. Patents by Segment

2018-2021



Source Notes

Employment, Establishments and Wages: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW), enhanced by Lightcast (Datarun 2022.3).

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).

Venture Capital: PitchBook Data, Inc.

Patents: U.S. Patent & Trademark Office data from Clarivate Analytics' Derwent Innovation patent analysis database.

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

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