



Minnesota

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

Minnesota's bioscience industry is large, specialized in its employment concentration, and has grown since 2018. Industry employment has increased by 7 percent since 2018 to more than 63,000 jobs in 2021 across 2,670 business establishments. Minnesota has a 52 percent greater concentration of bioscience employment relative to the national average—its location quotient is 1.52. Among the industry's major subsectors, Minnesota has a specialized concentration in three—medical devices and equipment; agricultural feedstock and industrial biosciences; and bioscience-related distribution. The state is among the top tier in bioscience-related patents awarded to Minnesota inventors, totaling 6,425 during the 2018-21 period. Minnesota is also among the top tier of states in venture capital investments to its bioscience companies, which have increased in recent years and reached \$1.7 billion in 2021.

Bioscience Performance Metrics

Summary of State Performance in Selected Bioscience-related Metrics

Metric	Minnesota	United States	Quintile
Bioscience Industry, 2021			
Bioscience Industry Employment	63,338	2,135,704	II
Bioscience Industry Location Quotient	1.52	n/a	I
Bioscience Industry Establishments	2,670	127,389	II
Academic Bioscience R&D Expenditures, FY 2020			
Bioscience R&D (\$ thousands)	\$769,419	\$51,108,737	II
Bioscience Share of Total R&D	74%	63%	I
Bioscience R&D Per Capita	\$135	\$154	III
NIH Funding, FY 2021			
Funding (\$ thousands)	\$644,519	\$34,751,109	II
Funding Per Capita	\$113	\$105	II
Bioscience Venture Capital Investments, 2018-21 (\$ millions)			
	\$3,862.22	\$197,674.54	I
Bioscience-Related Patents, 2018-21			
	6,425	153,072	I

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.

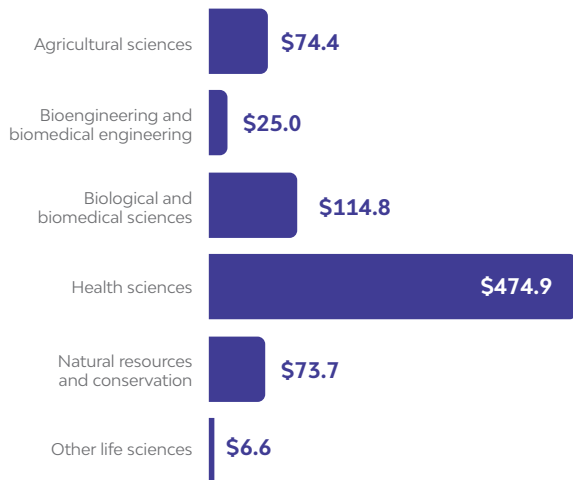
Industry Subsector		Minnesota		United States	
		2021	2018–2021 Change	2021	2018–2021 Change
Agricultural Feedstock and Industrial Biosciences	Establishments	42	-11.2%	1,948	10.0%
	Employment	1,761	-5.6%	69,573	1.9%
	<i>Location Quotient</i>	1.30		n/a	
	Average Annual Wage	\$78,266	8.9%	\$91,989	13.1%
Bioscience-Related Distribution	Establishments	1,574	18.2%	62,697	14.7%
	Employment	17,118	15.7%	602,589	6.6%
	<i>Location Quotient</i>	1.45		n/a	
	Average Annual Wage	\$129,978	13.1%	\$121,606	15.0%
Medical Devices and Equipment	Establishments	375	0.3%	10,268	17.4%
	Employment	30,591	8.5%	398,847	5.5%
	<i>Location Quotient</i>	3.93		n/a	
	Average Annual Wage	\$111,309	1.8%	\$98,481	8.7%
Pharmaceuticals	Establishments	61	-22.4%	5,973	34.7%
	Employment	4,998	14.6%	344,839	11.9%
	<i>Location Quotient</i>	0.74		n/a	
	Average Annual Wage	\$116,323	33.3%	\$126,153	10.3%
Research, Testing, and Medical Laboratories	Establishments	620	33.9%	46,503	34.5%
	Employment	8,871	-9.5%	719,856	19.3%
	<i>Location Quotient</i>	0.63		n/a	
	Average Annual Wage	\$113,294	16.6%	\$147,396	22.0%
Total Bioscience Industry	Establishments	2,670	16.4%	127,389	22.3%
	Employment	63,338	7.3%	2,135,704	11.0%
	<i>Location Quotient</i>	1.52		n/a	
	Average Annual Wage	\$116,110	9.6%	\$125,750	16.4%
Total Private Sector	Establishments	178,827	5.9%	10,665,643	9.3%
	Employment	2,409,638	-3.6%	123,376,557	-1.5%
	<i>Location Quotient</i>	1.00		n/a	
	Average Annual Wage	\$67,720	15.9%	\$67,826	18.9%

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

Bioscience Research in Minnesota

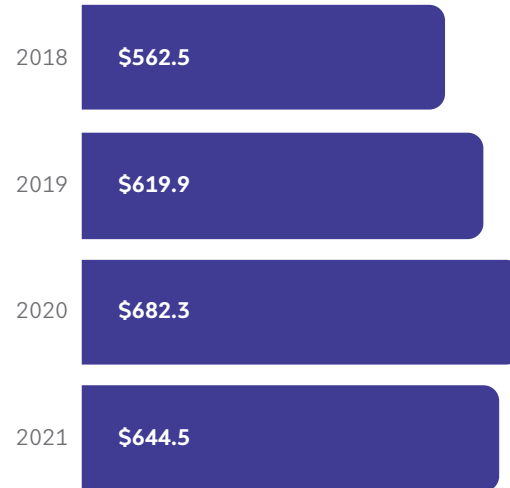
Bioscience Academic R&D Expenditures

\$ Millions, FY 2020



NIH Awards

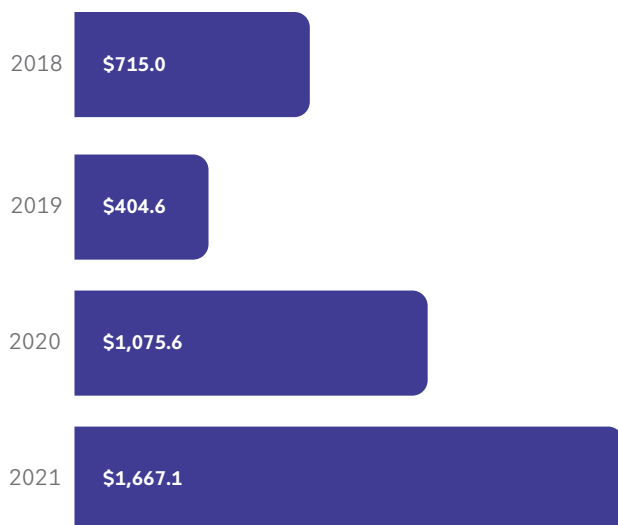
\$ Millions, FY 2018-2021



Bioscience Venture Capital in Minnesota

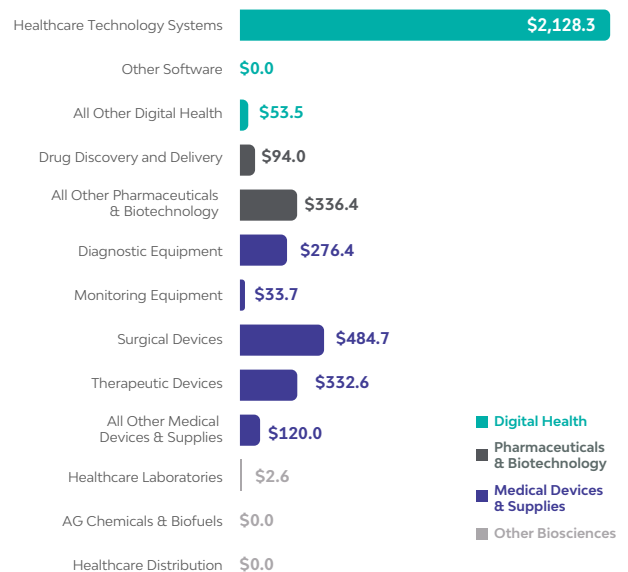
Bioscience-Related Venture Capital Investments

\$ Millions, 2018-2021



Bioscience-Related Venture Capital Investments by Segment

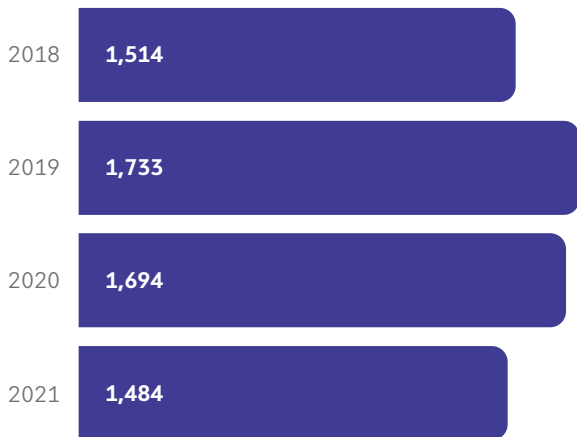
\$ Millions, 2018-2021



Bioscience Patents in Minnesota

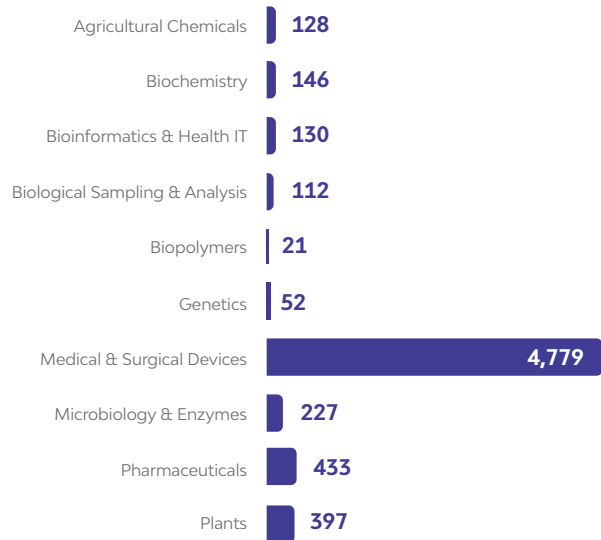
Bioscience-Related U.S. Patents

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.