



# Ohio

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

Ohio's large bioscience industry has grown its employment by nearly 8 percent since 2018, reaching more than 59,000 jobs in 2021 that span 4,290 business establishments. The state has high, above-average employment concentrations in two of its major subsectors—bioscience-related distribution and agricultural feedstock and industrial biosciences. Four of its five industry subsectors contributed to the overall job gains since 2018. Ohio is among the top tier of states in NIH funding awards, academic bioscience R&D expenditures which totaled \$1.6 billion in 2020, and in bioscience-related patent awards which totaled 5,810 over the 2018-21 period. Venture capital investments in Ohio bioscience companies increased significantly in 2021 and totaled nearly \$1.3 billion.

## Bioscience Performance Metrics

### Summary of State Performance in Selected Bioscience-related Metrics

Metric	Ohio	United States	Quintile
<b>Bioscience Industry, 2021</b>			
Bioscience Industry Employment	59,052	2,135,704	II
Bioscience Industry Location Quotient	0.75	n/a	III
Bioscience Industry Establishments	4,290	127,389	I
<b>Academic Bioscience R&amp;D Expenditures, FY 2020</b>			
Bioscience R&D (\$ thousands)	\$1,617,723	\$51,108,737	I
Bioscience Share of Total R&D	68%	63%	II
Bioscience R&D Per Capita	\$137	\$154	III
<b>NIH Funding, FY 2021</b>			
Funding (\$ thousands)	\$943,901	\$34,751,109	I
Funding Per Capita	\$80	\$105	III
<b>Bioscience Venture Capital Investments, 2018-21 (\$ millions)</b>			
	\$2,865.63	\$197,674.54	II
<b>Bioscience-Related Patents, 2018-21</b>			
	5,810	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.

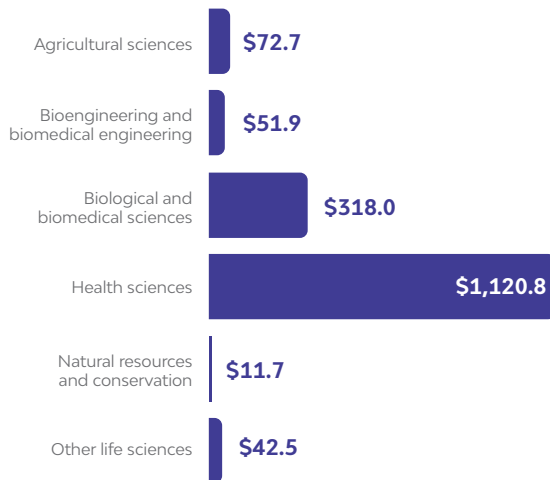
Industry Subsector		Ohio		United States	
		2021	2018–2021 Change	2021	2018–2021 Change
Agricultural Feedstock and Industrial Biosciences	Establishments	47	3.9%	1,948	10.0%
	Employment	2,785	7.1%	69,573	1.9%
	<i>Location Quotient</i>	1.09		n/a	
	Average Annual Wage	\$122,613	40.7%	\$91,989	13.1%
Bioscience- Related Distribution	Establishments	2,585	17.4%	62,697	14.7%
	Employment	26,039	5.9%	602,589	6.6%
	<i>Location Quotient</i>	1.17		n/a	
	Average Annual Wage	\$112,373	14.5%	\$121,606	15.0%
Medical Devices and Equipment	Establishments	232	11.9%	10,268	17.4%
	Employment	9,071	-0.9%	398,847	5.5%
	<i>Location Quotient</i>	0.62		n/a	
	Average Annual Wage	\$68,250	7.3%	\$98,481	8.7%
Pharmaceuticals	Establishments	86	40.8%	5,973	34.7%
	Employment	6,155	14.2%	344,839	11.9%
	<i>Location Quotient</i>	0.48		n/a	
	Average Annual Wage	\$91,011	12.8%	\$126,153	10.3%
Research, Testing, and Medical Laboratories	Establishments	1,339	27.5%	46,503	34.5%
	Employment	15,001	14.3%	719,856	19.3%
	<i>Location Quotient</i>	0.57		n/a	
	Average Annual Wage	\$91,220	15.1%	\$147,396	22.0%
Total Bioscience Industry	Establishments	4,290	20.3%	127,389	22.3%
	Employment	59,052	7.7%	2,135,704	11.0%
	<i>Location Quotient</i>	0.75		n/a	
	Average Annual Wage	\$98,478	15.0%	\$125,750	16.4%
Total Private Sector	Establishments	300,329	6.1%	10,665,643	9.3%
	Employment	4,546,151	-3.0%	123,376,557	-1.5%
	<i>Location Quotient</i>	1.00		n/a	
	Average Annual Wage	\$57,926	15.9%	\$67,826	18.9%

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

## Bioscience Research in Ohio

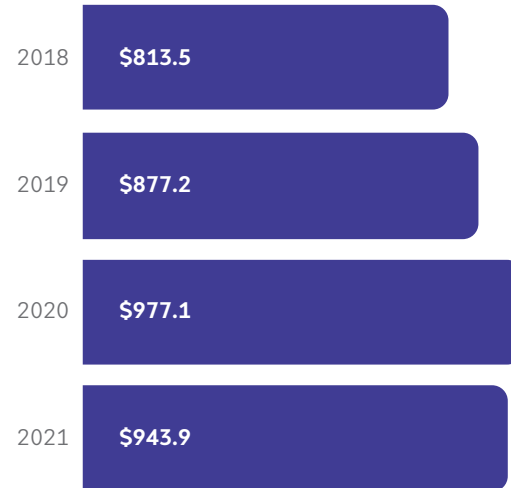
### Bioscience Academic R&D Expenditures

\$ Millions, FY 2020



### NIH Awards

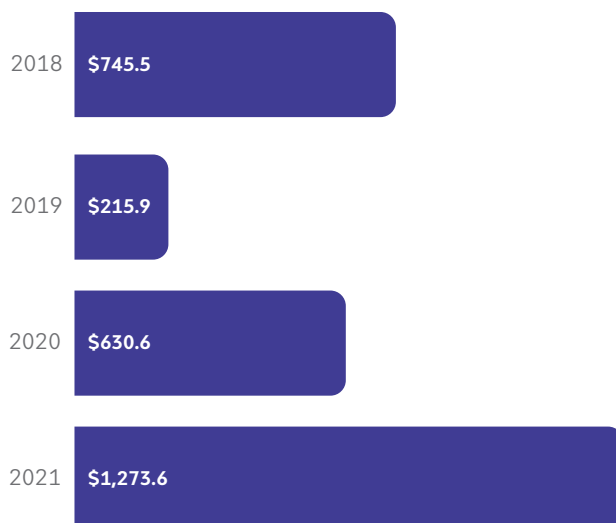
\$ Millions, FY 2018-2021



## Bioscience Venture Capital in Ohio

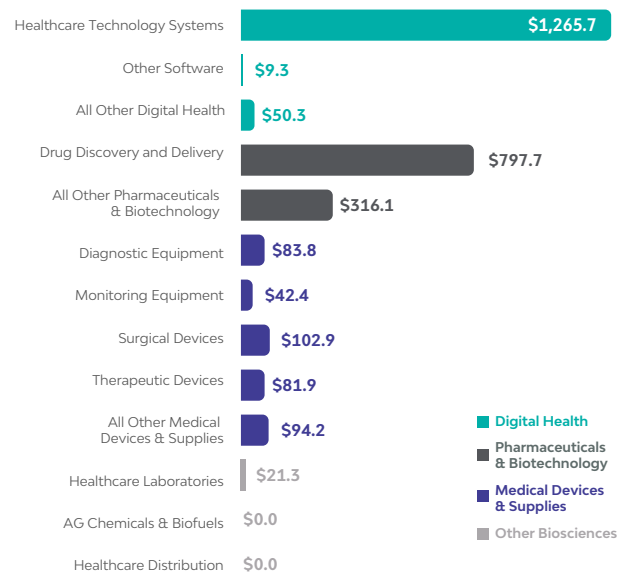
### Bioscience-Related Venture Capital Investments

\$ Millions, 2018-2021



### Bioscience-Related Venture Capital Investments by Segment

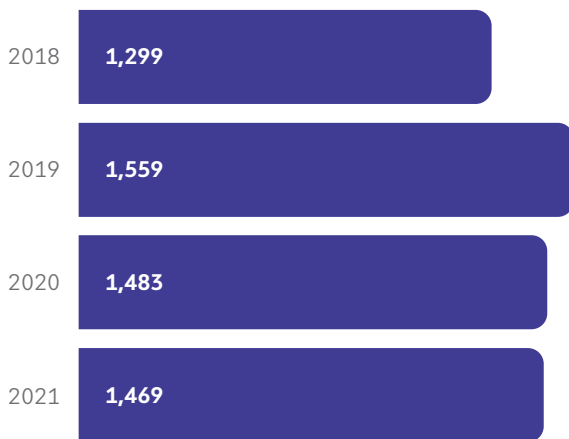
\$ Millions, 2018-2021



## Bioscience Patents in Ohio

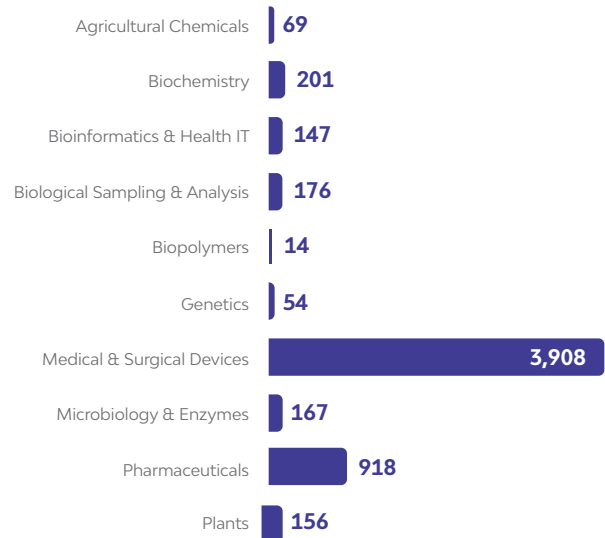
### Bioscience-Related U.S. Patents

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.*