



Indiana is home to a large and highly specialized bioscience industry that is 55 percent more concentrated in the state relative to the national average (location quotient is 1.55). Bioscience firms employed just over 58,000 in 2016 in 1,730 business establishments across the state. Indiana’s industry strengths are diverse, with three of the five major subsectors having strong specializations in their employment concentration, including: drugs and pharmaceuticals; agricultural feedstock and industrial biosciences; and medical device manufacturing. The state’s research universities spent \$621 million in bioscience-related R&D activities in 2016 funded, in part, by recent growth in NIH funding awards which reached nearly \$261 million in FY 2017. Indiana has a large volume of patents, with Hoosier inventors associated with 4,148 awarded from 2014 through 2017 in bioscience-related technology classes.

Bioscience Performance Metrics

Summary of State Performance in Selected Bioscience-related Metrics

Metric	Indiana	United States	Quintile
Bioscience Industry, 2016			
Bioscience Industry Employment	58,018	1,743,639	I
Bioscience Industry Location Quotient	1.55	n/a	I
Bioscience Industry Establishments	1,730	85,702	II
Academic Bioscience R&D Expenditures, FY 2016			
Bioscience R&D (\$ thousands)	\$621,386	\$41,972,205	III
Bioscience Share of Total R&D	50%	62%	IV
Bioscience R&D Per Capita	\$94	\$130	IV
NIH Funding, FY 2017			
Funding (\$ thousands)	\$260,620	\$26,150,485	III
Funding Per Capita	\$39	\$80	IV
Bioscience Venture Capital Investments, 2014-17 (\$ millions)	\$241.22	\$66,168.62	III
Bioscience and Related Patents, 2014-17	4,148	102,862	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	Indiana		United States	
	2016	2014-2016 Change	2016	2014-2016 Change
Agricultural Feedstock and Industrial Biosciences				
Establishments	50	6.4%	1,709	-3.2%
Employment	3,599	-24.6%	68,027	-1.2%
Location Quotient	2.46		n/a	
Direct-Effect Employment Multiplier	8.40			
Total Employment Impact	30,237			
Average Annual Wage	\$80,505	-13.0%	\$80,961	2.7%
Bioscience-Related Distribution				
Establishments	996	-4.1%	39,149	3.8%
Employment	10,284	-4.1%	469,640	3.7%
Location Quotient	1.02		n/a	
Direct-Effect Employment Multiplier	2.13			
Total Employment Impact	21,865			
Average Annual Wage	\$83,258	3.0%	\$93,677	2.7%
Drugs and Pharmaceuticals				
Establishments	47	11.9%	3,754	13.7%
Employment	17,862	2.6%	299,113	2.0%
Location Quotient	2.78		n/a	
Direct-Effect Employment Multiplier	5.05			
Total Employment Impact	90,170			
Average Annual Wage	\$139,002	3.5%	\$113,815	-3.2%
Medical Devices and Equipment				
Establishments	155	-0.6%	8,083	5.9%
Employment	17,317	3.1%	359,293	2.9%
Location Quotient	2.25		n/a	
Direct-Effect Employment Multiplier	2.57			
Total Employment Impact	44,476			
Average Annual Wage	\$67,793	2.3%	\$84,746	6.5%
Research, Testing and Medical Laboratories				
Establishments	482	10.2%	33,007	13.1%
Employment	8,955	6.8%	547,566	8.2%
Location Quotient	0.76		n/a	
Direct-Effect Employment Multiplier	2.04			
Total Employment Impact	18,308			
Average Annual Wage	\$69,873	2.6%	\$106,942	5.5%
Total Bioscience Industry				
Establishments	1,730	0.5%	85,702	7.7%
Employment	58,018	-0.1%	1,743,639	4.4%
Location Quotient	1.55		n/a	
Direct-Effect Employment Multiplier	3.53			
Total Employment Impact	205,056			
Average Annual Wage	\$93,567	1.9%	\$98,961	3.1%
Total Private Sector				
Establishments	155,307	2.2%	9,243,034	3.4%
Employment	2,595,247	3.8%	120,884,570	4.2%
Average Annual Wage	\$44,757	4.8%	\$53,354	4.3%

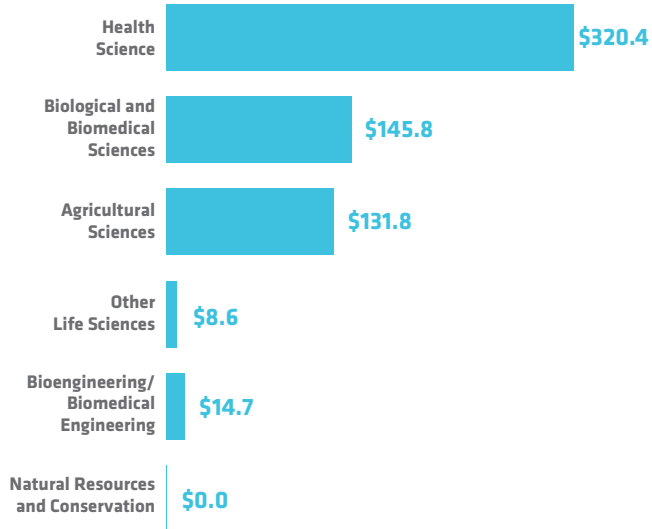
Note: U.S. employment metrics include Puerto Rico.

Bioscience Research in Indiana

Bioscience Academic R&D Expenditures

\$ Millions

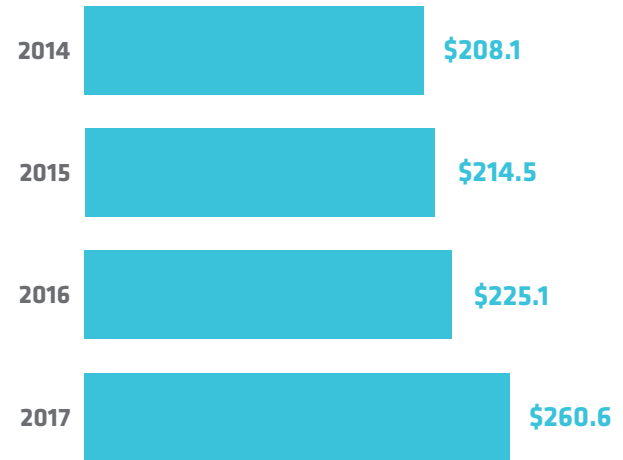
FY 2016



NIH Awards

\$ Millions

FY 2014-2017

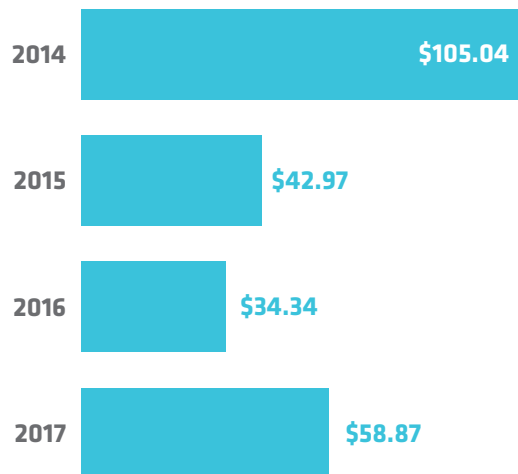


Bioscience Venture Capital in Indiana

Bioscience-Related Venture Capital Investments

\$ Millions

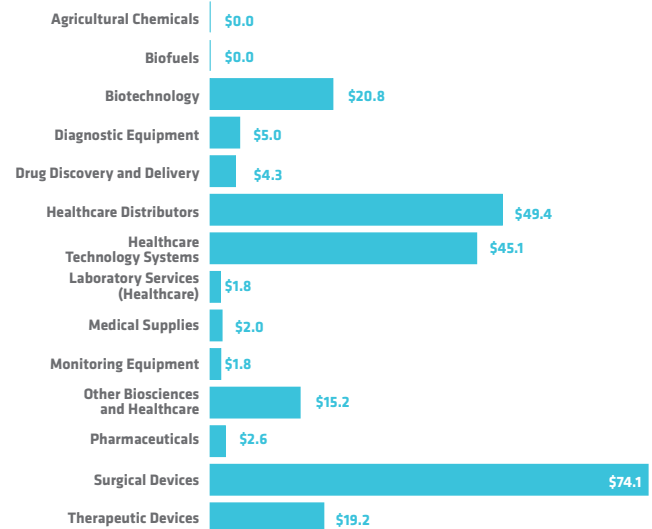
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Bioscience-Related Venture Capital Investments by Segment

\$ Millions

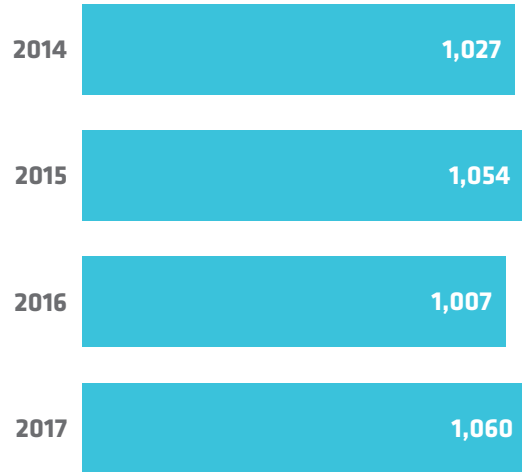
2014-2017



Bioscience Patents in Indiana

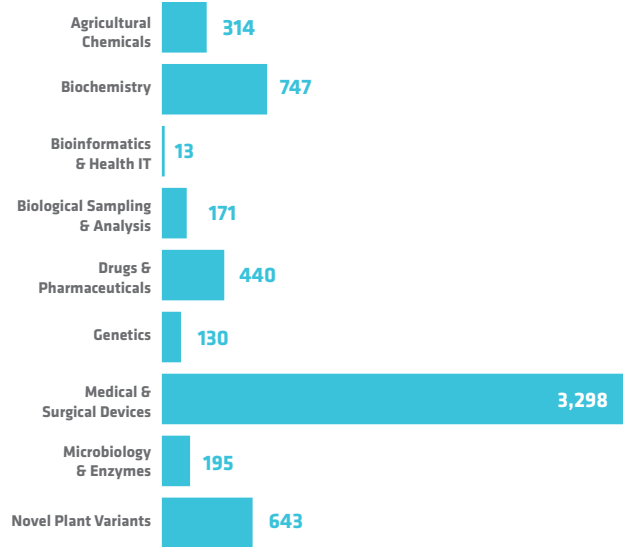
Bioscience-Related U.S. Patents

2014-2017



Bioscience-Related U.S. Patents by Segment

2014-2017



Source Notes

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

Employment Multipliers: IMPLAN 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).

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.