



Missouri’s sizable bioscience industry is growing, outpacing national job growth from 2014 through 2016 to reach just over 29,000 jobs. The 5.4 percent job growth over the 2-year period included increases from each of the state’s five major bioscience subsectors. Missouri has a specialized employment concentration in the agricultural feedstock and industrial biosciences subsector, where it is 86 percent more concentrated than the national average (location quotient is 1.86). The state’s research universities conducted \$920 million in bioscience-related R&D in 2016. Missouri has a particularly strong focus on biosciences research across its universities, accounting for 85 percent of all academic R&D. Funding for academic research is being bolstered by increases in federal NIH awards to Missouri institutions, which reached \$537.5 million in FY 2017.

Bioscience Performance Metrics

Summary of State Performance in Selected Bioscience-related Metrics

Metric	Missouri	United States	Quintile
Bioscience Industry, 2016			
Bioscience Industry Employment	29,047	1,743,639	III
Bioscience Industry Location Quotient	0.86	n/a	III
Bioscience Industry Establishments	1,382	85,702	II
Academic Bioscience R&D Expenditures, FY 2016			
Bioscience R&D (\$ thousands)	\$920,368	\$41,972,205	II
Bioscience Share of Total R&D	85%	62%	I
Bioscience R&D Per Capita	\$151	\$130	II
NIH Funding, FY 2017			
Funding (\$ thousands)	\$537,473	\$26,150,485	II
Funding Per Capita	\$88	\$80	II
Bioscience Venture Capital Investments, 2014-17 (\$ millions)	\$324.14	\$66,168.62	II
Bioscience and Related Patents, 2014-17	2,152	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	Missouri		United States	
	2016	2014-2016 Change	2016	2014-2016 Change
Agricultural Feedstock and Industrial Biosciences				
Establishments	67	-9.5%	1,709	-3.2%
Employment	2,450	1.3%	68,027	-1.2%
Location Quotient	1.86		n/a	
Direct-Effect Employment Multiplier	7.20			
Total Employment Impact	17,648			
Average Annual Wage	\$66,574	0.8%	\$80,961	2.7%
Bioscience-Related Distribution				
Establishments	613	6.6%	39,149	3.8%
Employment	8,041	1.3%	469,640	3.7%
Location Quotient	0.88		n/a	
Direct-Effect Employment Multiplier	2.30			
Total Employment Impact	18,527			
Average Annual Wage	\$72,103	5.3%	\$93,677	2.7%
Drugs and Pharmaceuticals				
Establishments	76	0.0%	3,754	13.7%
Employment	5,600	5.8%	299,113	2.0%
Location Quotient	0.97		n/a	
Direct-Effect Employment Multiplier	5.27			
Total Employment Impact	29,531			
Average Annual Wage	\$84,741	-4.5%	\$113,815	-3.2%
Medical Devices and Equipment				
Establishments	98	3.2%	8,083	5.9%
Employment	2,953	8.3%	359,293	2.9%
Location Quotient	0.42		n/a	
Direct-Effect Employment Multiplier	2.69			
Total Employment Impact	7,955			
Average Annual Wage	\$61,550	8.6%	\$84,746	6.5%
Research, Testing and Medical Laboratories				
Establishments	528	4.7%	33,007	13.1%
Employment	10,004	8.9%	547,566	8.2%
Location Quotient	0.94		n/a	
Direct-Effect Employment Multiplier	2.36			
Total Employment Impact	23,637			
Average Annual Wage	\$80,693	14.6%	\$106,942	5.5%
Total Bioscience Industry				
Establishments	1,382	4.4%	85,702	7.7%
Employment	29,047	5.4%	1,743,639	4.4%
Location Quotient	0.86		n/a	
Direct-Effect Employment Multiplier	3.35			
Total Employment Impact	97,298			
Average Annual Wage	\$75,959	6.0%	\$98,961	3.1%
Total Private Sector				
Establishments	184,741	5.4%	9,243,034	3.4%
Employment	2,340,646	4.0%	120,884,570	4.2%
Average Annual Wage	\$46,564	4.2%	\$53,354	4.3%

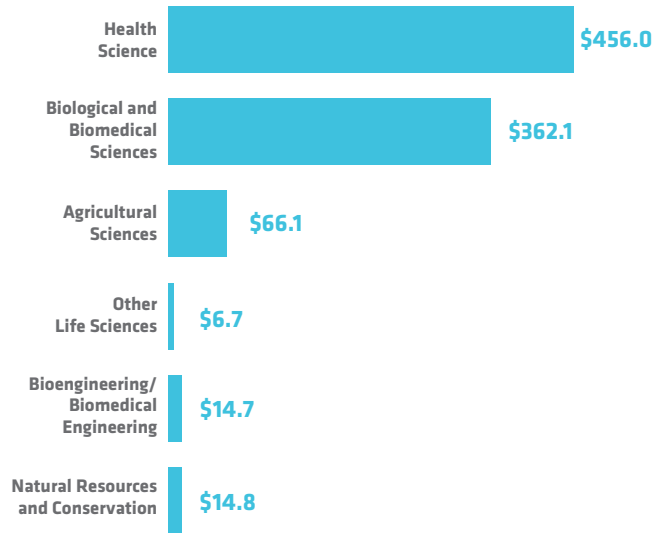
Note: U.S. employment metrics include Puerto Rico.

Bioscience Research in Missouri

Bioscience Academic R&D Expenditures

\$ Millions

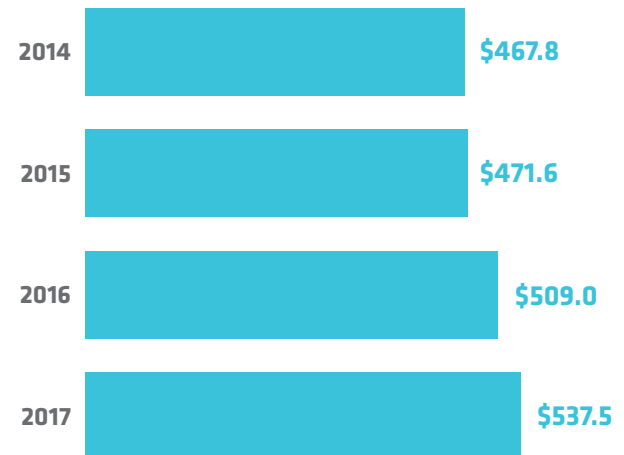
FY 2016



NIH Awards

\$ Millions

FY 2014-2017

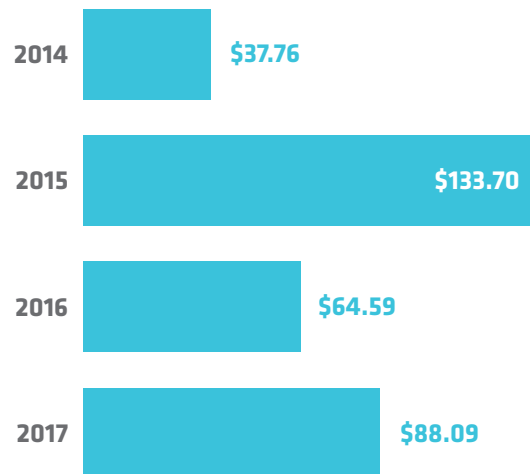


Bioscience Venture Capital in Missouri

Bioscience-Related Venture Capital Investments

\$ Millions

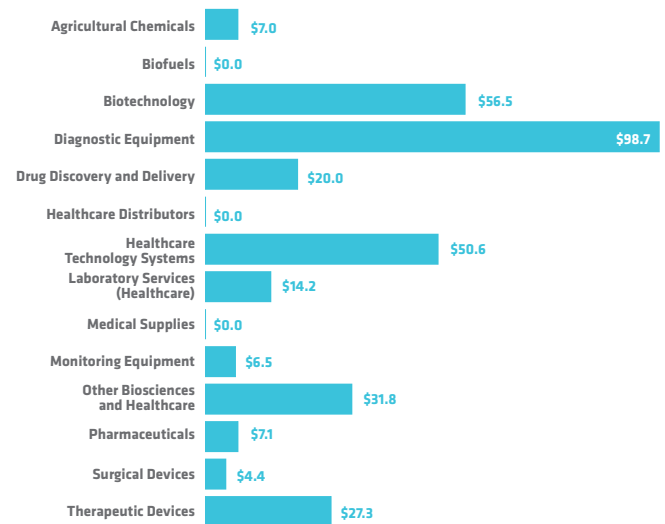
2014-2017



Bioscience-Related Venture Capital Investments by Segment

\$ Millions

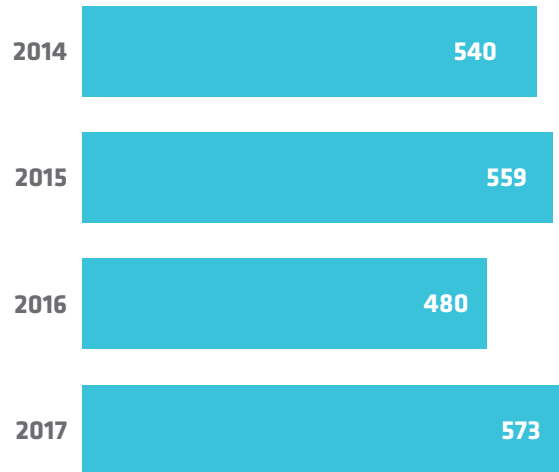
2014-2017



Bioscience Patents in Missouri

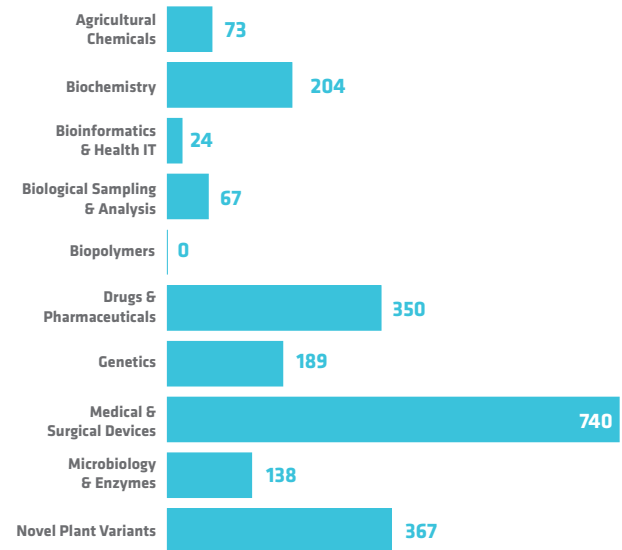
Bioscience-Related U.S. Patents

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.