



Oklahoma’s bioscience industry has grown at a rapid pace in recent years, with state firms increasing their employment base by 13.4 percent to 9,698 jobs from 2014 through 2016. This growth rate far outpaces that for the nation (4.4 percent) during this period. Job growth occurred throughout the industry with all five subsectors contributing job gains. Industry firms operate 894 business establishments across the state. Oklahoma has a specialized employment concentration in the agricultural feedstock and industrial biosciences subsector (location quotient is 1.43). NIH funding awards to state research institutions have risen in recent years, reaching \$92 million in FY 2017.

Bioscience Performance Metrics

Summary of State Performance in Selected Bioscience-related Metrics

Metric	Oklahoma	United States	Quintile
Bioscience Industry, 2016			
Bioscience Industry Employment	9,698	1,743,639	IV
Bioscience Industry Location Quotient	0.54	n/a	V
Bioscience Industry Establishments	894	85,702	IV
Academic Bioscience R&D Expenditures, FY 2016			
Bioscience R&D (\$ thousands)	\$246,105	\$41,972,205	IV
Bioscience Share of Total R&D	57%	62%	III
Bioscience R&D Per Capita	\$63	\$130	V
NIH Funding, FY 2017			
Funding (\$ thousands)	\$92,144	\$26,150,485	IV
Funding Per Capita	\$23	\$80	V
Bioscience Venture Capital Investments, 2014-17 (\$ millions)	\$52.27	\$66,168.62	IV
Bioscience and Related Patents, 2014-17	278	102,862	IV

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	Oklahoma		United States	
	2016	2014-2016 Change	2016	2014-2016 Change
Agricultural Feedstock and Industrial Biosciences				
Establishments	17	-6.8%	1,709	-3.2%
Employment	1,010	13.1%	68,027	-1.2%
Location Quotient	1.43		n/a	
Direct-Effect Employment Multiplier	8.38			
Total Employment Impact	8,469			
Average Annual Wage	\$84,297	1.3%	\$80,961	2.7%
Bioscience-Related Distribution				
Establishments	483	-8.9%	39,149	3.8%
Employment	3,683	0.3%	469,640	3.7%
Location Quotient	0.76		n/a	
Direct-Effect Employment Multiplier	2.10			
Total Employment Impact	7,749			
Average Annual Wage	\$86,811	4.8%	\$93,677	2.7%
Drugs and Pharmaceuticals				
Establishments	25	-7.4%	3,754	13.7%
Employment	664	23.6%	299,113	2.0%
Location Quotient	0.21		n/a	
Direct-Effect Employment Multiplier	4.88			
Total Employment Impact	3,238			
Average Annual Wage	\$95,417	15.0%	\$113,815	-3.2%
Medical Devices and Equipment				
Establishments	55	-17.9%	8,083	5.9%
Employment	885	15.6%	359,293	2.9%
Location Quotient	0.24		n/a	
Direct-Effect Employment Multiplier	2.46			
Total Employment Impact	2,180			
Average Annual Wage	\$56,924	-3.1%	\$84,746	6.5%
Research, Testing and Medical Laboratories				
Establishments	314	13.4%	33,007	13.1%
Employment	3,454	28.8%	547,566	8.2%
Location Quotient	0.61		n/a	
Direct-Effect Employment Multiplier	1.95			
Total Employment Impact	6,738			
Average Annual Wage	\$56,875	1.5%	\$106,942	5.5%
Total Bioscience Industry				
Establishments	894	-2.7%	85,702	7.7%
Employment	9,698	13.4%	1,743,639	4.4%
Location Quotient	0.54		n/a	
Direct-Effect Employment Multiplier	2.93			
Total Employment Impact	28,375			
Average Annual Wage	\$73,746	2.0%	\$98,961	3.1%
Total Private Sector				
Establishments	103,620	2.1%	9,243,034	3.4%
Employment	1,252,175	-0.8%	120,884,570	4.2%
Average Annual Wage	\$43,805	-0.6%	\$53,354	4.3%

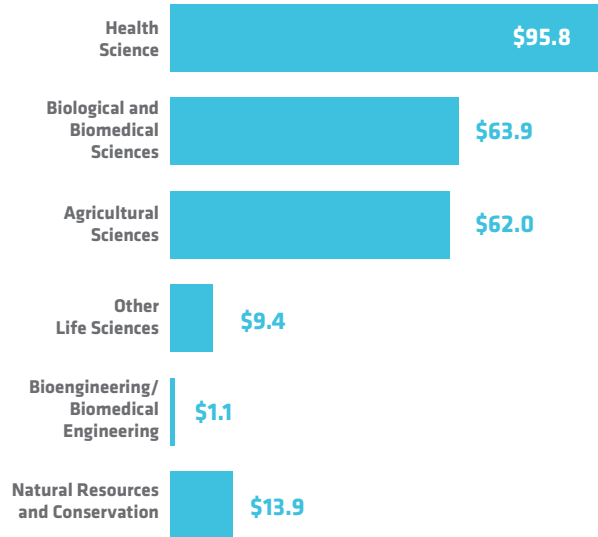
Note: U.S. employment metrics include Puerto Rico.

Bioscience Research in Oklahoma

Bioscience Academic R&D Expenditures

\$ Millions

FY 2016



NIH Awards

\$ Millions

FY 2014-2017

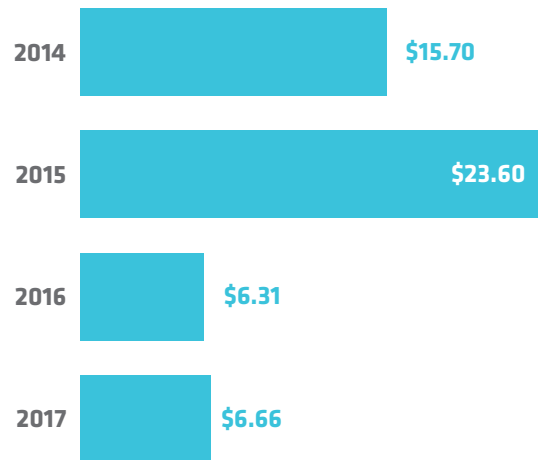


Bioscience Venture Capital in Oklahoma

Bioscience-Related Venture Capital Investments

\$ Millions

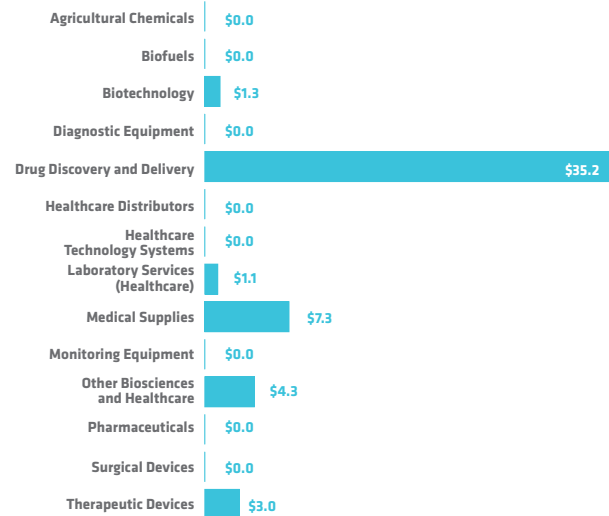
2014-2017



Bioscience-Related Venture Capital Investments by Segment

\$ Millions

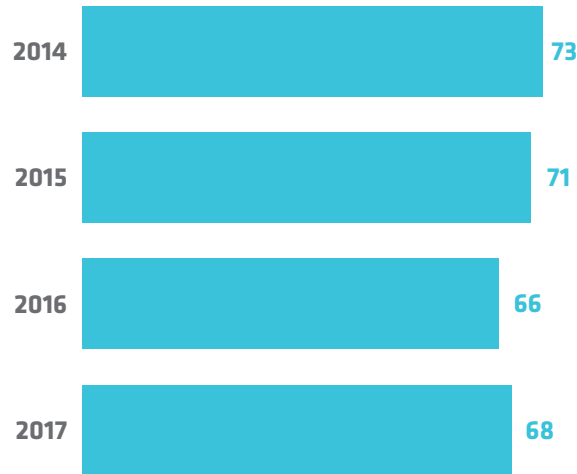
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Bioscience Patents in Oklahoma

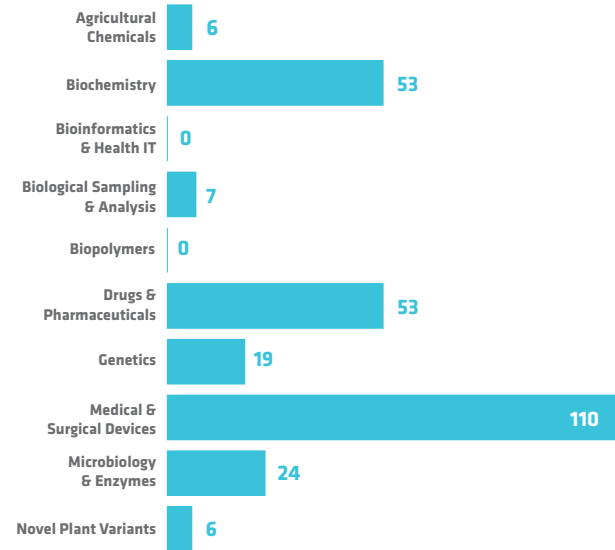
Bioscience-Related U.S. Patents

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.