



TEconomy/BIO

The Value of Bioscience Innovation in Growing Jobs and Improving Quality of Life 2016

Oklahoma

Oklahoma's bioscience companies employed more than 8,300 in 2014 while operating 915 business establishments across the state. The state's two largest component subsectors are bioscience-related distribution and research, testing, and medical labs. While Oklahoma's bioscience industry had an overall employment decline since 2012 (down 2 percent), two of its five industry subsectors added jobs—drugs and pharmaceuticals and agricultural feedstock and chemicals. Average annual wages for Oklahoma bioscience workers exceeded \$72,000 in 2014, 63 percent greater than those for the overall state private sector. Oklahoma inventors have been issued 278 patents in bioscience-related technology areas since 2012, these have been focused largely in medical and surgical devices, drugs and pharmaceuticals, and biochemistry.

Bioscience Performance Metrics

Summary of State Performance in Selected Bioscience-related Metrics

Metric	Oklahoma	United States	Quintile
Bioscience Industry, 2014			
Bioscience Industry Employment	8,332	1,655,680	IV
Bioscience Industry Location Quotient	0.46	n/a	V
Bioscience Industry Establishments	915	77,283	III
Academic Bioscience R&D Expenditures, FY 2014			
Bioscience R&D (\$ thousands)	\$217,465	\$38,873,926	IV
Bioscience Share of Total R&D	55%	61%	III
Bioscience R&D Per Capita	\$56	\$122	V
NIH Funding, FY 2015			
Funding (\$ thousands)	\$86,167	\$22,869,746	IV
Funding Per Capita	\$22	\$71	V
Bioscience Venture Capital Investments, 2012–15 (\$ millions)	\$55.5	\$48,742.10	III
Bioscience and Related Patents, 2012–15	278	101,026	IV

State ranking figures for bioscience performance metrics are calculated as quintiles, where:

top quintile – I II III IV V – bottom quintile

For source notes, see end of State Profile.



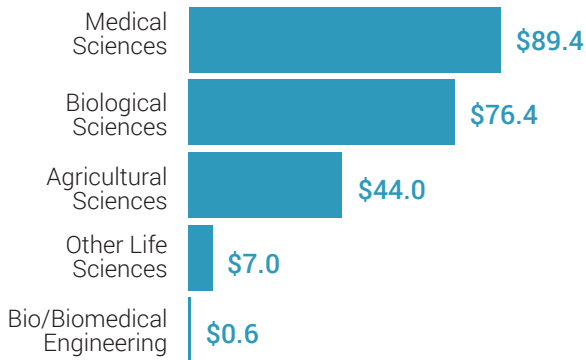
Industry Subsector	Oklahoma		United States	
	2014	2012–2014 Change	2014	2012–2014 Change
Agricultural Feedstock and Chemicals				
Establishments	18	30.4%	1,811	2.2%
Employment	893	1.3%	77,545	1.5%
Location Quotient	1.06		n/a	
Direct-Effect Employment Multiplier	18.5		18.4	
Total Employment Impact	16,506		1,432,125	
Average Annual Wage	\$83,206	25.5%	\$80,640	6.3%
Bioscience-Related Distribution				
Establishments	548	-12.8%	37,833	2.8%
Employment	3,786	-4.4%	452,325	2.3%
Location Quotient	0.77		n/a	
Direct-Effect Employment Multiplier	2.8		3.0	
Total Employment Impact	10,726		1,358,820	
Average Annual Wage	\$81,104	3.1%	\$90,458	6.2%
Drugs and Pharmaceuticals				
Establishments	27	0.0%	3,301	8.0%
Employment	537	47.5%	293,353	3.2%
Location Quotient	0.17		n/a	
Direct-Effect Employment Multiplier	9.9		11.0	
Total Employment Impact	5,318		3,242,627	
Average Annual Wage	\$82,980	2.6%	\$117,524	10.3%
Medical Devices and Equipment				
Establishments	67	-14.1%	7,636	5.5%
Employment	766	-7.9%	349,045	-0.1%
Location Quotient	0.20		n/a	
Direct-Effect Employment Multiplier	4.2		4.6	
Total Employment Impact	3,208		1,596,802	
Average Annual Wage	\$58,725	3.2%	\$79,537	5.1%
Research, Testing, and Medical Laboratories				
Establishments	254	12.2%	26,702	10.2%
Employment	2,351	-5.5%	483,412	3.4%
Location Quotient	0.45		n/a	
Direct-Effect Employment Multiplier	2.7		3.1	
Total Employment Impact	6,443		1,554,719	
Average Annual Wage	\$54,998	1.6%	\$97,485	6.8%
Total Bioscience Industry				
Establishments	915	-6.1%	77,283	5.7%
Employment	8,332	-2.2%	1,655,680	2.2%
Location Quotient	0.46		n/a	
Direct-Effect Employment Multiplier	5.0		5.5	
Total Employment Impact	41,935		9,185,094	
Average Annual Wage	\$72,030	5.6%	\$94,543	7.2%
Total Private Sector				
Establishments	101,463	2.7%	8,937,672	2.7%
Employment	1,262,095	3.4%	116,018,300	4.4%
Average Annual Wage	\$44,083	5.5%	\$51,148	4.3%

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



Bioscience Research in Oklahoma

Bioscience Academic R&D Expenditures
\$ Millions
FY 2014

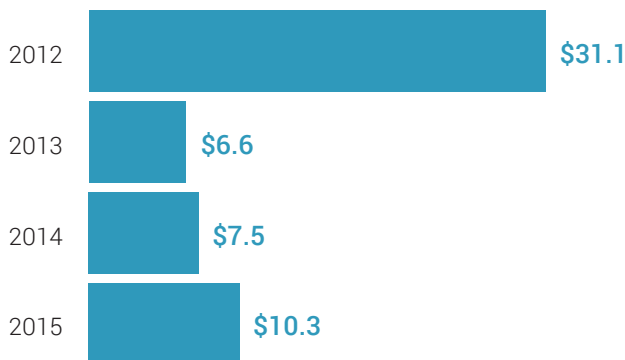


NIH Awards
\$ Millions
FY 2012-2015

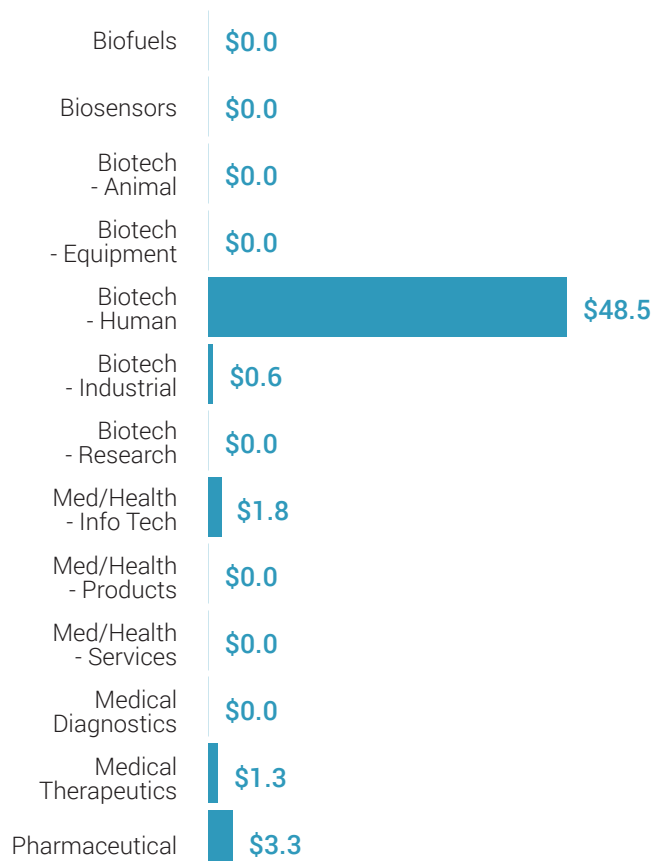


Bioscience Venture Capital in Oklahoma

Bioscience-Related Venture
Capital Investments
\$ Millions
2012-2015



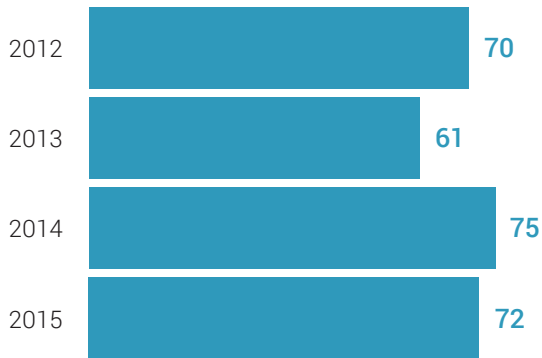
Bioscience-Related Venture
Capital Investments by Segment
\$ Millions
2012-2015



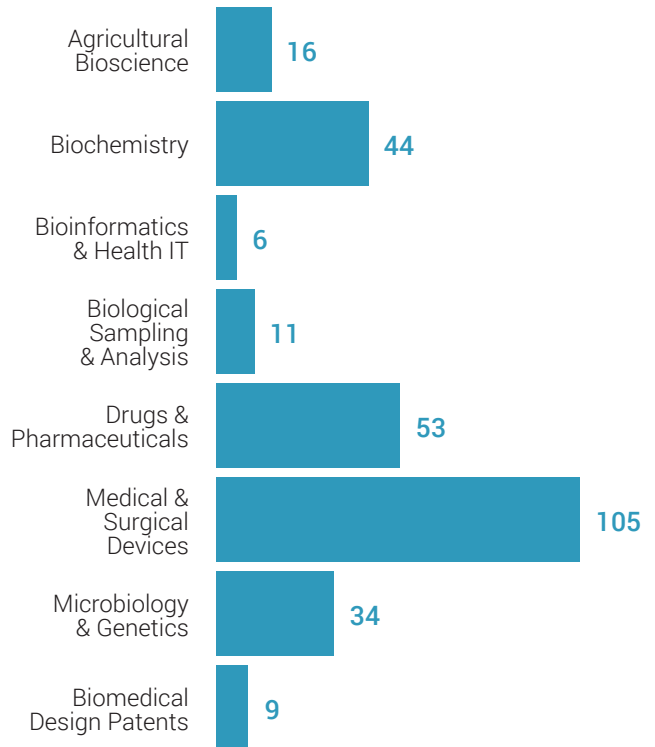


Bioscience Patents in Oklahoma

Bioscience-Related U.S. Patents 2012-2015



Bioscience-Related U.S. Patents by Segment 2012-2015



Source Notes

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

Employment Multipliers: IMPLAN Group, LLC 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: Thomson Reuters Thomson ONE venture capital database.

Patents: U.S. Patent & Trademark Office data from Thomson Reuters Thomson Innovation patent analysis database.

For a more detailed discussion of the data and methodology used, please see the Appendix to the full national report.

