



Arkansas' bioscience industry is growing at a strong rate, increasing its employment base by 12 percent since 2014 to reach 6,965 jobs in 2016. State firms operate 639 business establishments, a figure which has also grown since 2014 (up 6.5 percent). Arkansas has a specialized concentration of jobs in agricultural feedstock and industrial biosciences with a location quotient of 1.43; the subsector grew its employment base by nearly 10 percent from 2014 through 2016. The state's universities have a strong R&D focus in bioscience-related fields, with 81 percent of academic research expenditures in these areas. State inventors are associated with 326 patents awarded from 2014 through 2017, with the majority in medical and surgical devices and in novel plant variants.

Bioscience Performance Metrics

Summary of State Performance in Selected Bioscience-related Metrics

Metric	Arkansas	United States	Quintile
Bioscience Industry, 2016			
Bioscience Industry Employment	6,965	1,743,639	IV
Bioscience Industry Location Quotient	0.49	n/a	V
Bioscience Industry Establishments	639	85,702	IV
Academic Bioscience R&D Expenditures, FY 2016			
Bioscience R&D (\$ thousands)	\$229,479	\$41,972,205	IV
Bioscience Share of Total R&D	81%	62%	I
Bioscience R&D Per Capita	\$77	\$130	IV
NIH Funding, FY 2017			
Funding (\$ thousands)	\$57,121	\$26,150,485	IV
Funding Per Capita	\$19	\$80	V
Bioscience Venture Capital Investments, 2014-17 (\$ millions)			
	\$15.99	\$66,168.62	V
Bioscience and Related Patents, 2014-17			
	326	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	Arkansas		United States	
	2016	2014-2016 Change	2016	2014-2016 Change
Agricultural Feedstock and Industrial Biosciences				
Establishments	22	15.8%	1,709	-3.2%
Employment	800	9.8%	68,027	-1.2%
Location Quotient	1.43		n/a	
Direct-Effect Employment Multiplier	8.75			
Total Employment Impact	6,997			
Average Annual Wage	\$63,598	13.5%	\$80,961	2.7%
Bioscience-Related Distribution				
Establishments	330	-7.5%	39,149	3.8%
Employment	3,120	-5.4%	469,640	3.7%
Location Quotient	0.81		n/a	
Direct-Effect Employment Multiplier	2.06			
Total Employment Impact	6,431			
Average Annual Wage	\$55,134	3.8%	\$93,677	2.7%
Drugs and Pharmaceuticals				
Establishments	17	21.4%	3,754	13.7%
Employment	323	21.9%	299,113	2.0%
Location Quotient	0.13		n/a	
Direct-Effect Employment Multiplier	4.70			
Total Employment Impact	1,519			
Average Annual Wage	\$54,148	5.7%	\$113,815	-3.2%
Medical Devices and Equipment				
Establishments	31	-8.8%	8,083	5.9%
Employment	1,280	162.5%	359,293	2.9%
Location Quotient	0.43		n/a	
Direct-Effect Employment Multiplier	2.30			
Total Employment Impact	2,948			
Average Annual Wage	\$45,918	-0.9%	\$84,746	6.5%
Research, Testing and Medical Laboratories				
Establishments	240	35.3%	33,007	13.1%
Employment	1,442	0.7%	547,566	8.2%
Location Quotient	0.32		n/a	
Direct-Effect Employment Multiplier	1.87			
Total Employment Impact	2,696			
Average Annual Wage	\$58,012	1.7%	\$106,942	5.5%
Total Bioscience Industry				
Establishments	639	6.5%	85,702	7.7%
Employment	6,965	12.1%	1,743,639	4.4%
Location Quotient	0.49		n/a	
Direct-Effect Employment Multiplier	2.96			
Total Employment Impact	20,590			
Average Annual Wage	\$54,963	2.2%	\$98,961	3.1%
Total Private Sector				
Establishments	84,369	2.0%	9,243,034	3.4%
Employment	993,997	3.8%	120,884,570	4.2%
Average Annual Wage	\$41,270	3.9%	\$53,354	4.3%

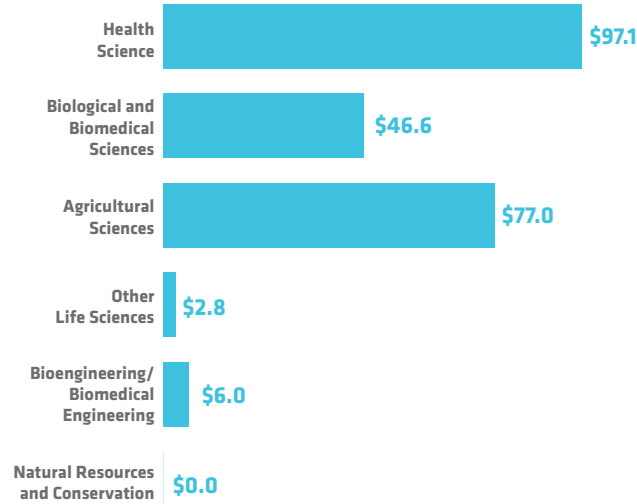
Note: U.S. employment metrics include Puerto Rico.

Bioscience Research in Arkansas

Bioscience Academic R&D Expenditures

\$ Millions

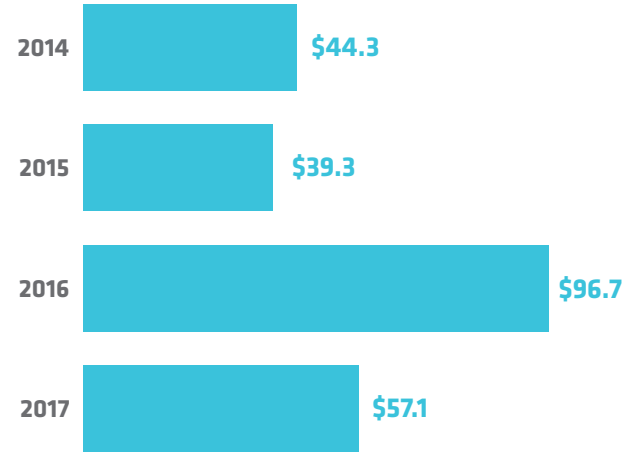
FY 2016



NIH Awards

\$ Millions

FY 2014-2017

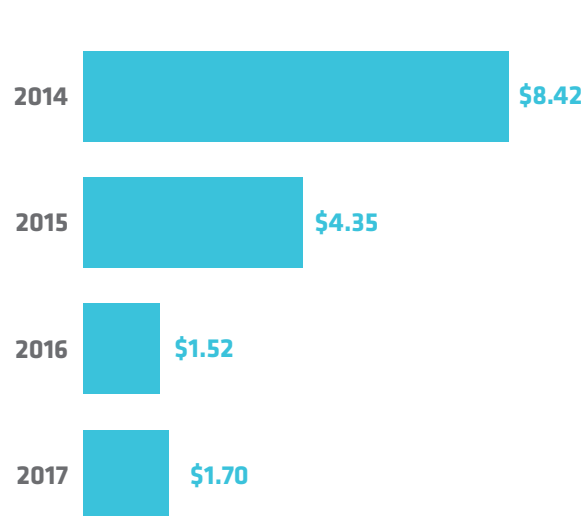


Bioscience Venture Capital in Arkansas

Bioscience-Related Venture Capital Investments

\$ Millions

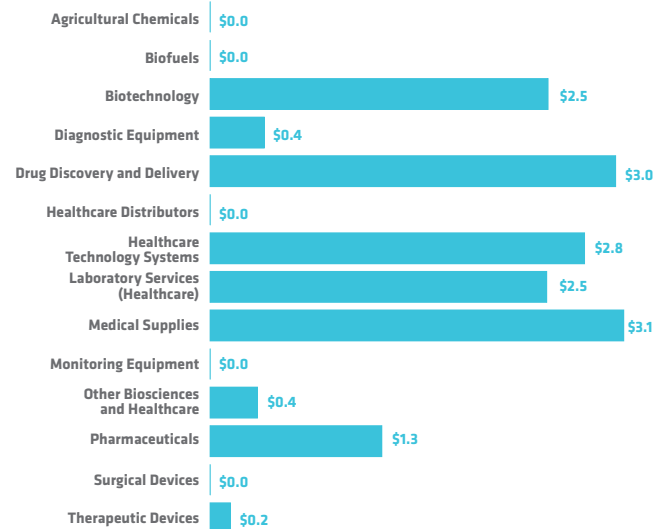
2014-2017



Bioscience-Related Venture Capital Investments by Segment

\$ Millions

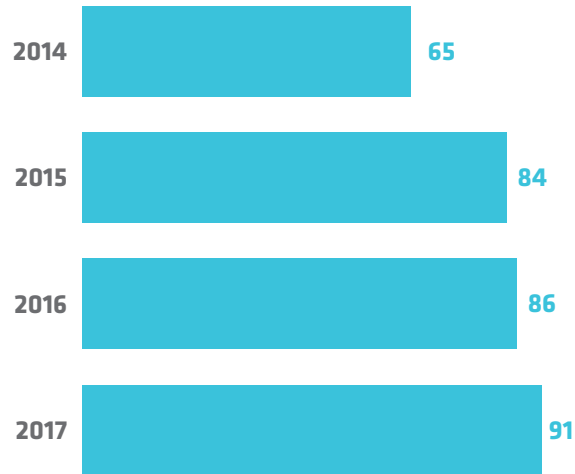
2014-2017



Bioscience Patents in Arkansas

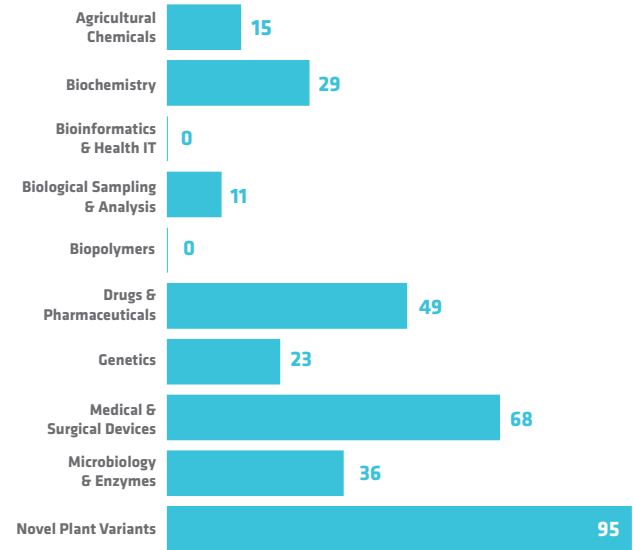
Bioscience-Related U.S. Patents

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.