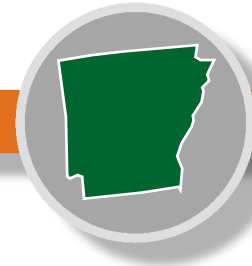


## Arkansas



Arkansas’ bioscience industry employed 6,405 in 2012 in just over 600 business establishments. Average annual wages for these state bioscience workers approach \$52,000 compared with nearly \$38,000 for the overall private sector. Two of the five major industry subsectors have added jobs since 2007—drugs and pharmaceuticals, which has a small but growing employment level; and research, testing, and medical labs which employs more than 1,300 in the state and has grown by 15 percent since 2007. Arkansas has a strong focus in bioscience-related academic R&D expenditures relative to other fields with 78 percent of R&D in the life sciences compared with 61 percent, on average, for the U.S. Arkansas inventors have been issued 241 bioscience-related patents since 2009 primarily in drugs and pharmaceuticals, biochemistry, and biotechnology.

### Bioscience Performance Metrics

#### Summary of State Performance in Selected Bioscience-related Metrics

Metric	Arkansas	United States	Quintile
<b>Bioscience Industry, 2012</b>			
Bioscience Industry Employment	6,405	1,619,746	IV
Bioscience Industry Location Quotient	0.47	n/a	V
Bioscience Industry Establishments	602	73,088	IV
<b>Academic Bioscience R&amp;D Expenditures, FY 2012</b>			
Bioscience R&D (\$ thousands)	\$215,877	\$38,139,876	IV
Bioscience Share of Total R&D	78%	61%	I
Bioscience R&D Per Capita	\$73	\$119	IV
<b>NIH Funding, FY 2013</b>			
Funding (\$ thousands)	\$47,376	\$22,293,255	IV
Funding Per Capita	\$16	\$70	V
<b>Bioscience Venture Capital Investments, 2009–13 (\$ millions)</b>	\$0.4	\$49,401.7	V
<b>Bioscience and Related Patents, 2009–13</b>	241	100,238	IV

State ranking figures for bioscience performance metrics are calculated as quintiles, where I = top quintile, III = middle quintile, and V = bottom quintile.

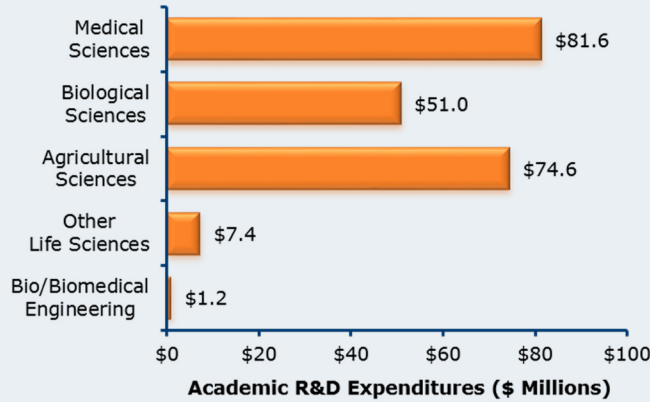
For source notes, see end of State Profile.

Industry Subsector	Arkansas		United States	
	2012	2007–2012 Change	2012	2007–2012 Change
<b>Agricultural Feedstock &amp; Chemicals</b>				
Establishments	22	-15.4%	1,772	5.2%
Employment	708	-7.1%	76,404	-1.0%
Location Quotient	1.09		n/a	
Direct-Effect Employment Multiplier	21.3		18.1	
Total Employment Impact	15,109		1,382,637	
Average Annual Wage	\$46,835	5.6%	\$75,828	14.2%
<b>Bioscience-Related Distribution</b>				
Establishments	404	-0.7%	36,793	1.4%
Employment	3,878	-0.7%	442,016	-3.9%
Location Quotient	1.00		n/a	
Direct-Effect Employment Multiplier	2.5		2.7	
Total Employment Impact	9,534		1,199,015	
Average Annual Wage	\$50,844	22.7%	\$85,188	11.5%
<b>Drugs and Pharmaceuticals</b>				
Establishments	13	-18.8%	3,057	12.0%
Employment	164	15.5%	284,331	-10.9%
Location Quotient	0.07		n/a	
Direct-Effect Employment Multiplier	6.6		9.9	
Total Employment Impact	1,087		2,673,265	
Average Annual Wage	\$54,868	53.7%	\$106,576	13.9%
<b>Medical Devices and Equipment</b>				
Establishments	30	-23.1%	7,235	12.0%
Employment	338	-80.0%	349,432	1.4%
Location Quotient	0.11		n/a	
Direct-Effect Employment Multiplier	2.9		3.9	
Total Employment Impact	963		1,318,459	
Average Annual Wage	\$48,259	30.2%	\$75,695	10.7%
<b>Research, Testing, and Medical Laboratories</b>				
Establishments	132	33.1%	24,231	31.0%
Employment	1,317	14.9%	467,563	9.7%
Location Quotient	0.33		n/a	
Direct-Effect Employment Multiplier	2.3		2.7	
Total Employment Impact	2,969		1,284,196	
Average Annual Wage	\$56,914	18.7%	\$91,248	15.9%
<b>Total Bioscience Industry</b>				
Establishments	602	2.4%	73,088	11.4%
Employment	6,405	-16.2%	1,619,746	-0.4%
Location Quotient	0.47		n/a	
Direct-Effect Employment Multiplier	4.2		4.9	
Total Employment Impact	27,215		7,857,572	
Average Annual Wage	\$51,616	24.0%	\$88,202	12.8%
<b>Total Private Sector</b>				
Establishments	80,844	2.7%	8,699,564	-0.5%
Employment	944,522	-3.3%	111,137,206	-3.1%
Average Annual Wage	\$37,872	12.3%	\$49,130	11.1%

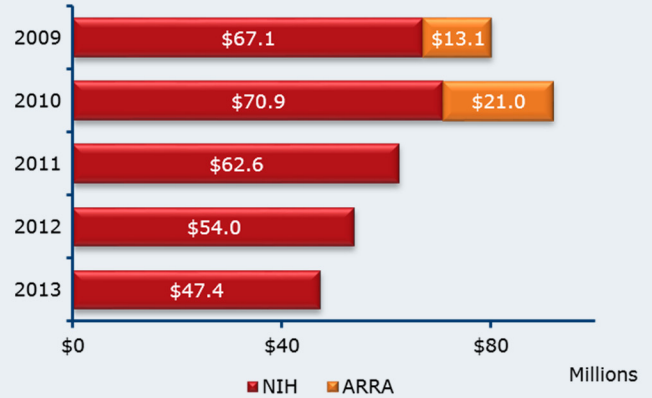
Note: U.S. employment metrics include Puerto Rico. Estimates of total impacts do not include Puerto Rico.

## Bioscience Research in Arkansas

**Bioscience R&D Expenditures, FY 2012**

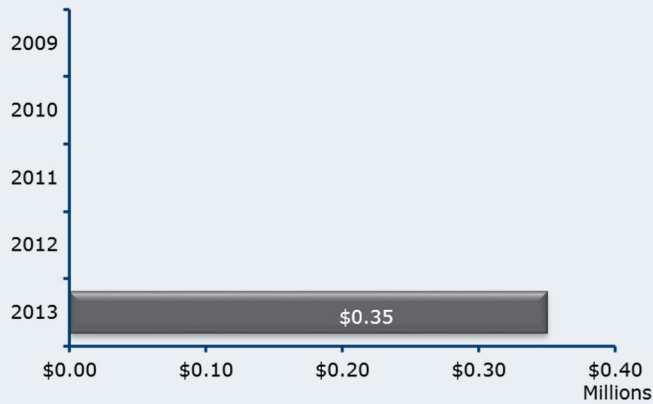


**NIH Awards, 2009–2013**

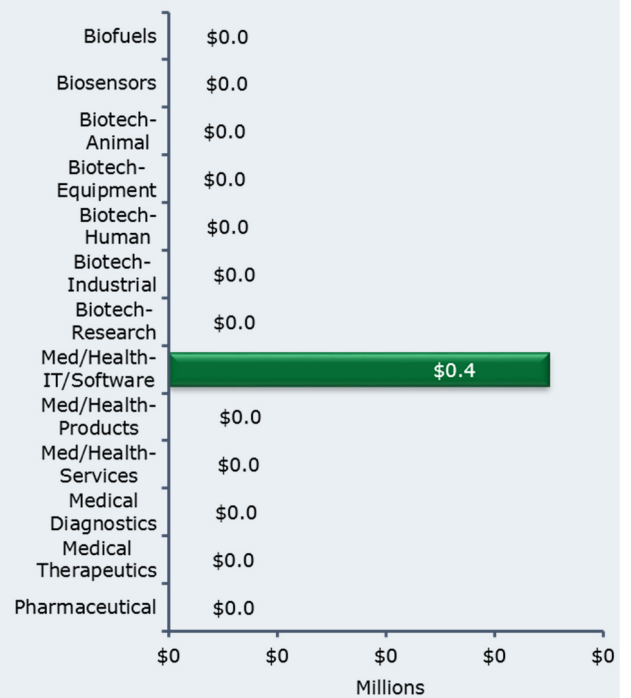


## Bioscience Venture Capital in Arkansas

**Bioscience-Related Venture Capital Investments, FY 2012**

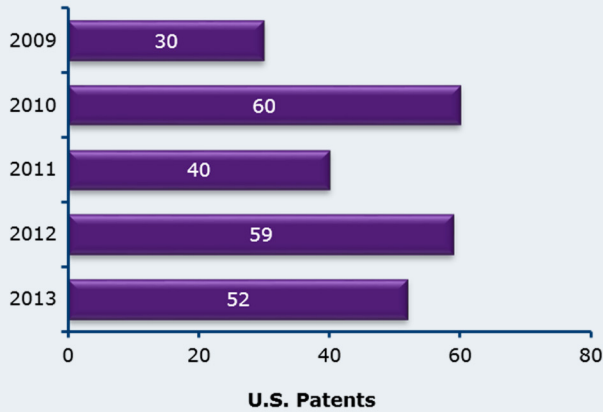


**Bioscience-Related Venture Capital Investments by Segment, 2009–2013**

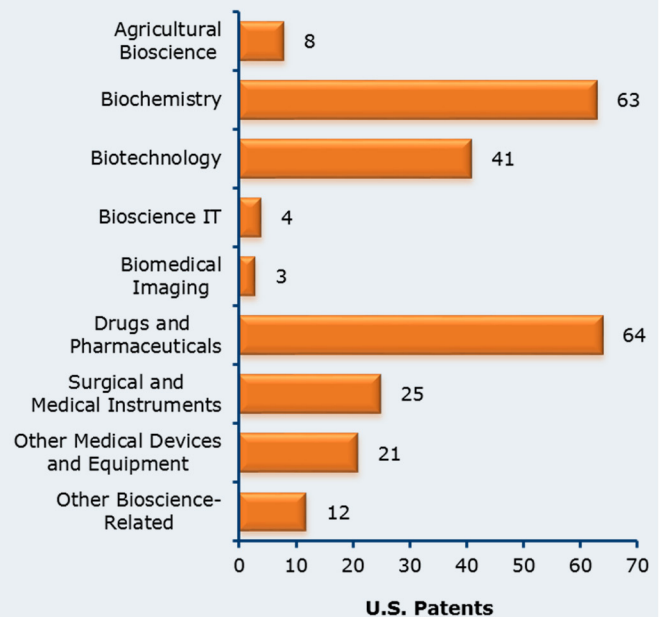


## Bioscience Patents in Arkansas

### Bioscience-Related Patents, FY 2012



### Bioscience-Related Patents by Segment, 2009–2013



## 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), and NIH-managed funding for FY 2009 and FY 2010 from the American Recovery and Reinvestment Act (ARRA) website.

**Venture Capital:** Thomson Reuters Thomson ONE venture capital database.

**Patents:** U.S. Patent & Trademark Office data from Thomson Reuters Delphion Patent Analysis Database.

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