

## Missouri



Missouri’s more than 28,000 bioscience industry jobs in 2012 were spread across a diverse set of industry subsectors and 1,330 business establishments. The state has a specialization in agricultural feedstock and chemicals with a location quotient of 1.65—a 65 percent greater concentration in agbioscience employment relative to the national average. Missouri has an above-average concentration in research, testing, and medical labs, a state subsector with nearly 10,000 jobs. The state’s research universities are especially focused in the biosciences relative to other fields with their nearly \$895 million in bioscience academic R&D in 2012 accounting for 85 percent of all academic research compared with 61 percent for the national average. Much of the \$295 million in venture capital invested in Missouri’s bioscience companies since 2009 has been focused in health IT/software.

### Bioscience Performance Metrics

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

Metric	Missouri	United States	Quintile
<b>Bioscience Industry, 2012</b>			
Bioscience Industry Employment	28,109	1,619,746	II
Bioscience Industry Location Quotient	0.88	n/a	III
Bioscience Industry Establishments	1,330	73,088	II
<b>Academic Bioscience R&amp;D Expenditures, FY 2012</b>			
Bioscience R&D (\$ thousands)	\$894,726	\$38,139,876	II
Bioscience Share of Total R&D	85%	61%	I
Bioscience R&D Per Capita	\$148	\$119	II
<b>NIH Funding, FY 2013</b>			
Funding (\$ thousands)	\$409,220	\$22,293,255	II
Funding Per Capita	\$68	\$70	II
<b>Bioscience Venture Capital Investments, 2009–13 (\$ millions)</b>	\$295.4	\$49,401.7	II
<b>Bioscience and Related Patents, 2009–13</b>	2,022	100,238	II

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

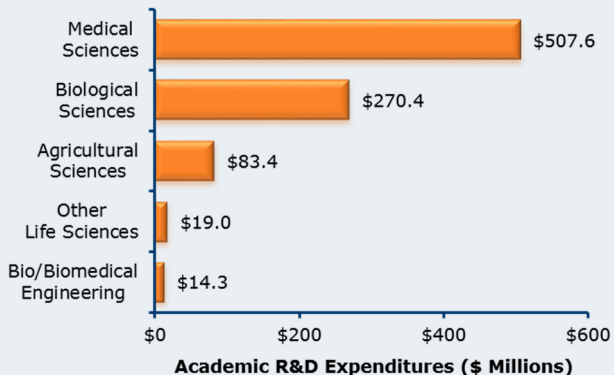
For source notes, see end of State Profile.

Industry Subsector	Missouri		United States	
	2012	2007-2012 Change	2012	2007-2012 Change
<b>Agricultural Feedstock &amp; Chemicals</b>				
Establishments	79	-7.1%	1,772	5.2%
Employment	2,481	-2.5%	76,404	-1.0%
Location Quotient	1.65		n/a	
Direct-Effect Employment Multiplier	20.0		18.1	
Total Employment Impact	49,618		1,382,637	
Average Annual Wage	\$66,685	8.8%	\$75,828	14.2%
<b>Bioscience-Related Distribution</b>				
Establishments	650	-12.0%	36,793	1.4%
Employment	8,091	-7.2%	442,016	-3.9%
Location Quotient	0.89		n/a	
Direct-Effect Employment Multiplier	2.8		2.7	
Total Employment Impact	22,295		1,199,015	
Average Annual Wage	\$70,474	7.0%	\$85,188	11.5%
<b>Drugs and Pharmaceuticals</b>				
Establishments	61	-19.7%	3,057	12.0%
Employment	5,051	-3.0%	284,331	-10.9%
Location Quotient	0.90		n/a	
Direct-Effect Employment Multiplier	9.1		9.9	
Total Employment Impact	45,882		2,673,265	
Average Annual Wage	\$77,156	16.5%	\$106,576	13.9%
<b>Medical Devices and Equipment</b>				
Establishments	102	14.6%	7,235	12.0%
Employment	2,704	-15.2%	349,432	1.4%
Location Quotient	0.39		n/a	
Direct-Effect Employment Multiplier	3.6		3.9	
Total Employment Impact	9,715		1,318,459	
Average Annual Wage	\$53,903	11.6%	\$75,695	10.7%
<b>Research, Testing, and Medical Laboratories</b>				
Establishments	439	16.1%	24,231	31.0%
Employment	9,782	-1.9%	467,563	9.7%
Location Quotient	1.06		n/a	
Direct-Effect Employment Multiplier	2.8		2.7	
Total Employment Impact	27,123		1,284,196	
Average Annual Wage	\$72,569	-16.1%	\$91,248	15.9%
<b>Total Bioscience Industry</b>				
Establishments	1,330	-2.6%	73,088	11.4%
Employment	28,109	-5.1%	1,619,746	-0.4%
Location Quotient	0.88		n/a	
Direct-Effect Employment Multiplier	5.2		4.9	
Total Employment Impact	146,146		7,857,572	
Average Annual Wage	\$70,475	-0.2%	\$88,202	12.8%
<b>Total Private Sector</b>				
Establishments	167,523	1.5%	8,699,564	-0.5%
Employment	2,189,388	-4.6%	111,137,206	-3.1%
Average Annual Wage	\$43,151	11.0%	\$49,130	11.1%

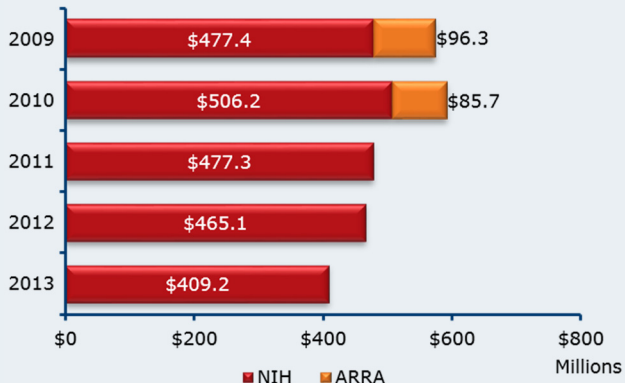
Note: U.S. employment metrics include Puerto Rico. Estimates of total impacts do not include Puerto Rico.

## Bioscience Research in Missouri

### Bioscience Academic R&D Expenditures, FY 2012



### NIH Awards, 2009–2013

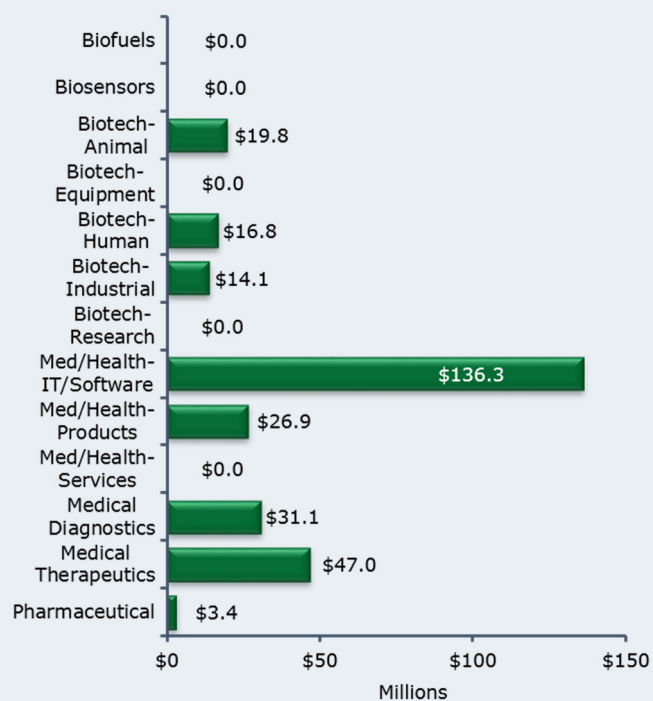


## Bioscience Venture Capital in Missouri

### Bioscience-Related Venture Capital Investments, 2009–2013

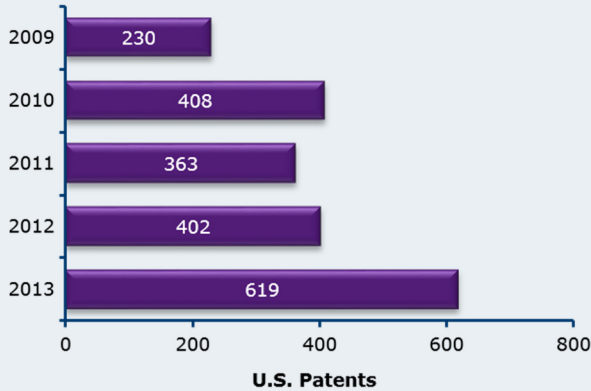


### Bioscience-Related Venture Capital Investments by Segment, 2009–2013

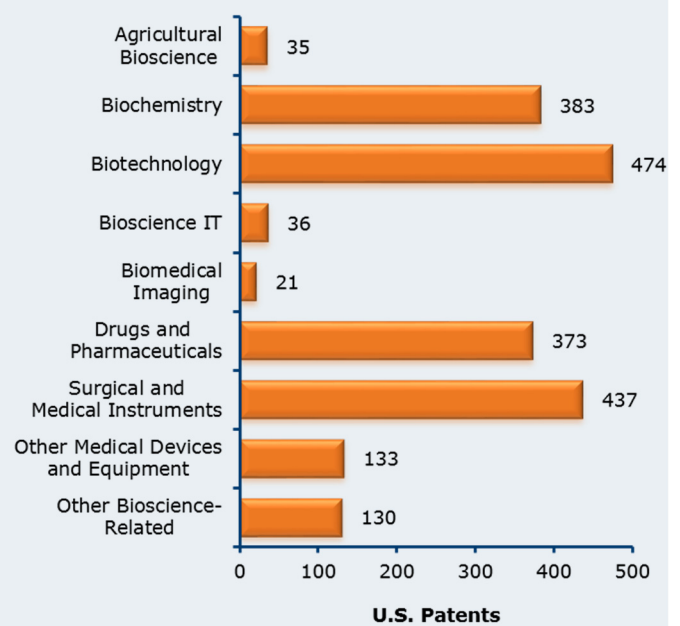


## Bioscience Patents in Missouri

**Bioscience-Related Patents, 2009–2013**



**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.