



TEconomy/BIO

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

Illinois

Illinois' bioscience industry is large, highly concentrated, and diverse with three specialized industry subsectors. The state's bioscience companies employed nearly 81,000 in 3,744 state business establishments in 2014. The industry in Illinois is growing, with employment up by 3.1 percent from 2012 to 2014, with gains coming from four of its five industry subsectors. Illinois has a 14 percent greater concentration of jobs in the biosciences relative to the national average. Three of its industry subsectors have a specialized employment concentration—agricultural feedstock and chemicals; drugs and pharmaceuticals; and bioscience-related distribution. Illinois has a large academic bioscience R&D base, with \$1.4 billion in 2014 expenditures placing it among the top tier of states. The state also is among the leading states in NIH funding, bioscience venture capital investments, and bioscience-related patents issued since 2012.

Bioscience Performance Metrics

Summary of State Performance in Selected Bioscience-related Metrics

Metric	Illinois	United States	Quintile	
Bioscience Industry, 2014				
Bioscience Industry Employment	80,965	1,655,680	I	I
Bioscience Industry Location Quotient	1.14	n/a	II	II
Bioscience Industry Establishments	3,744	77,283	I	I
Academic Bioscience R&D Expenditures, FY 2014				
Bioscience R&D (\$ thousands)	\$1,396,626	\$38,873,926	I	I
Bioscience Share of Total R&D	62%	61%	III	III
Bioscience R&D Per Capita	\$108	\$122	III	III
NIH Funding, FY 2015				
Funding (\$ thousands)	\$735,888	\$22,869,746	I	I
Funding Per Capita	\$57	\$71	III	III
Bioscience Venture Capital Investments, 2012–15 (\$ millions)	\$1,139.0	\$48,742.10	I	I
Bioscience and Related Patents, 2012–15	4,414	101,026	I	I

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.



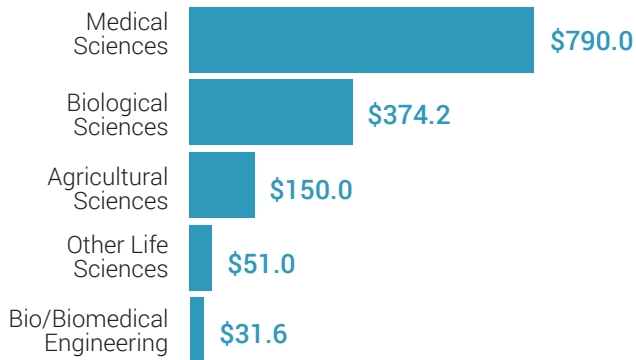
Industry Subsector	Illinois		United States	
	2014	2012–2014 Change	2014	2012–2014 Change
Agricultural Feedstock and Chemicals				
Establishments	96	7.9%	1,811	2.2%
Employment	8,424	3.4%	77,545	1.5%
Location Quotient	2.54		n/a	
Direct-Effect Employment Multiplier	24.0		18.4	
Total Employment Impact	201,815		1,432,125	
Average Annual Wage	\$94,910	9.1%	\$80,640	6.3%
Bioscience-Related Distribution				
Establishments	2,092	4.6%	37,833	2.8%
Employment	27,118	4.5%	452,325	2.3%
Location Quotient	1.40		n/a	
Direct-Effect Employment Multiplier	3.1		3.0	
Total Employment Impact	84,649		1,358,820	
Average Annual Wage	\$92,275	-3.4%	\$90,458	6.2%
Drugs and Pharmaceuticals				
Establishments	151	18.9%	3,301	8.0%
Employment	18,436	3.8%	293,353	3.2%
Location Quotient	1.47		n/a	
Direct-Effect Employment Multiplier	12.9		11.0	
Total Employment Impact	237,067		3,242,627	
Average Annual Wage	\$168,056	19.5%	\$117,524	10.3%
Medical Devices and Equipment				
Establishments	466	11.2%	7,636	5.5%
Employment	12,052	-0.7%	349,045	-0.1%
Location Quotient	0.81		n/a	
Direct-Effect Employment Multiplier	4.8		4.6	
Total Employment Impact	58,427		1,596,802	
Average Annual Wage	\$98,148	-5.4%	\$79,537	5.1%
Research, Testing, and Medical Laboratories				
Establishments	939	10.3%	26,702	10.2%
Employment	14,934	2.6%	483,412	3.4%
Location Quotient	0.72		n/a	
Direct-Effect Employment Multiplier	3.3		3.1	
Total Employment Impact	49,078		1,554,719	
Average Annual Wage	\$99,110	-4.0%	\$97,485	6.8%
Total Bioscience Industry				
Establishments	3,744	7.4%	77,283	5.7%
Employment	80,965	3.1%	1,655,680	2.2%
Location Quotient	1.14		n/a	
Direct-Effect Employment Multiplier	7.1		5.5	
Total Employment Impact	574,654		9,185,094	
Average Annual Wage	\$111,940	4.1%	\$94,543	7.2%
Total Private Sector				
Establishments	397,913	6.0%	8,937,672	2.7%
Employment	4,967,898	2.7%	116,018,300	4.4%
Average Annual Wage	\$54,297	3.7%	\$51,148	4.3%

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

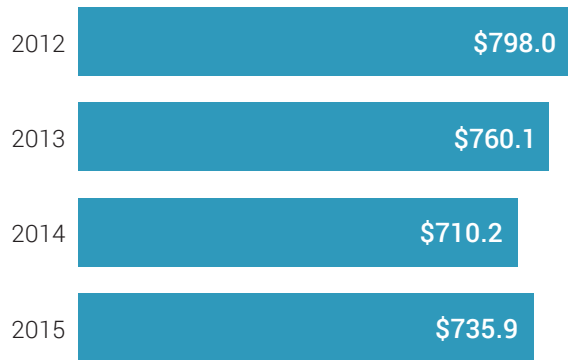


Bioscience Research in Illinois

Bioscience Academic R&D Expenditures
\$ Millions
FY 2014

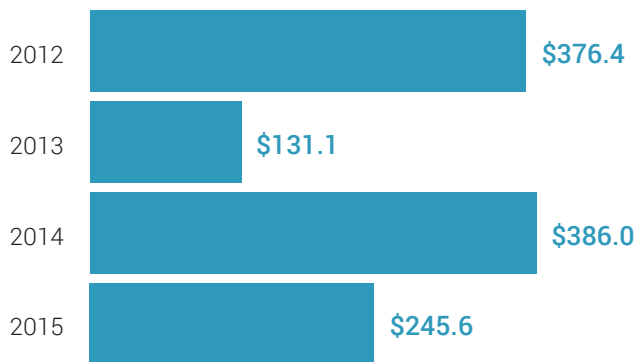


NIH Awards
\$ Millions
FY 2012-2015

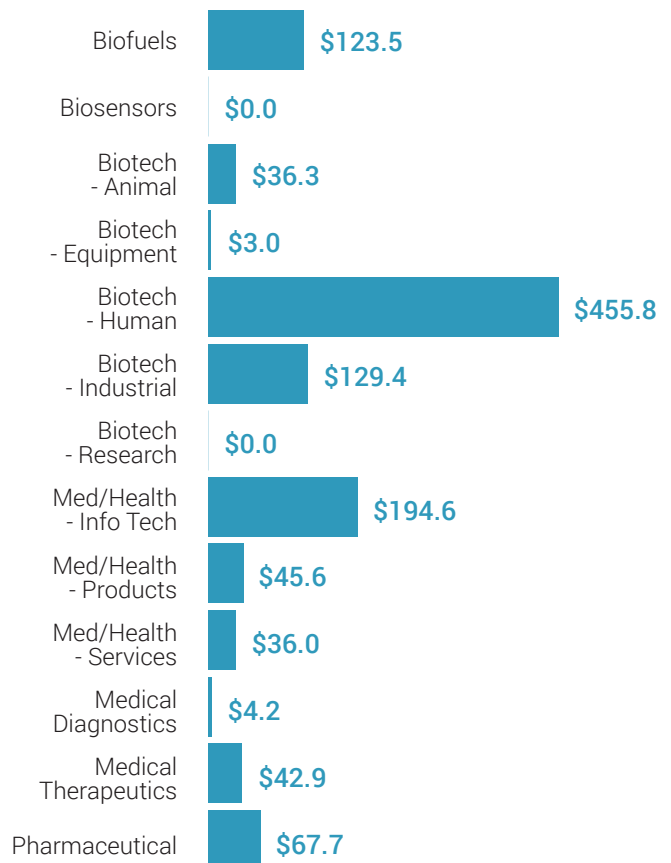


Bioscience Venture Capital in Illinois

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



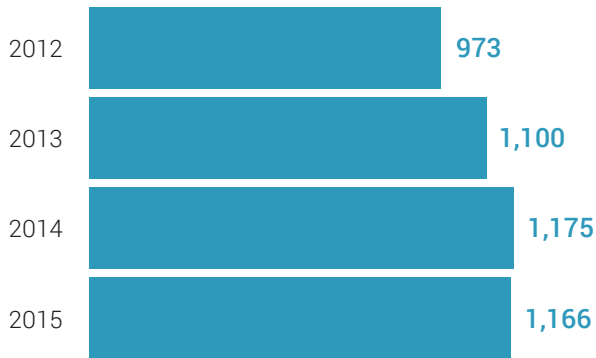
Bioscience-Related Venture
Capital Investments by Segment
\$ Millions
2012-2015



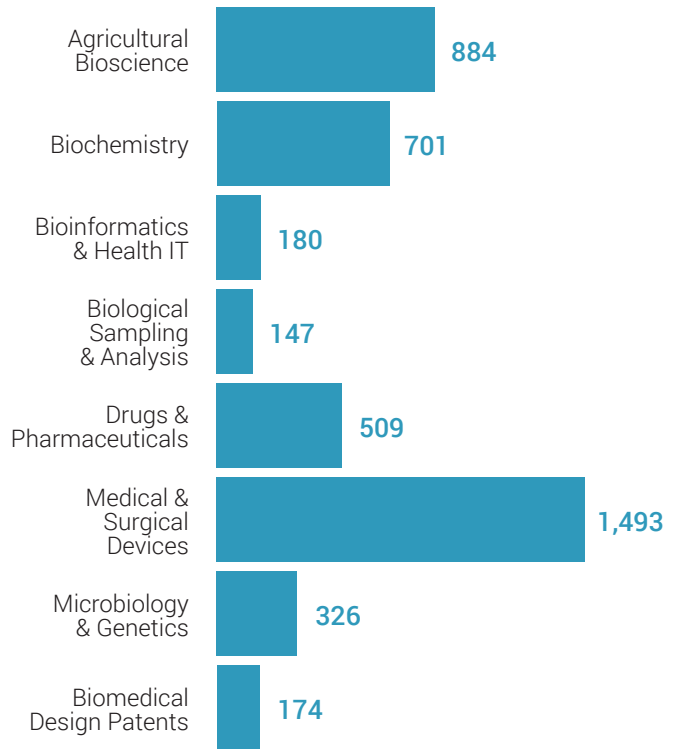


Bioscience Patents in Illinois

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.

