



Illinois' bioscience industry is large, highly concentrated, and growing. The state's more than 85,000 jobs place it among the top tier of bioscience states in terms of employment. Illinois' firms have increased employment by 3.8 percent since 2014, slightly below the national growth rate for the industry. Each of the five subsectors added jobs during this period. Bioscience firms operate 3,778 business establishments across the state with diverse niche employment specializations in three of the five subsectors— agricultural feedstock and industrial biosciences; drugs and pharmaceuticals; and bioscience-related distribution. State research universities spent \$1.4 billion on bioscience-related R&D in 2016. Illinois companies received nearly \$1.6 billion in venture capital investments from 2014 through 2017.

## Bioscience Performance Metrics

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

Metric	Illinois	United States	Quintile
<b>Bioscience Industry, 2016</b>			
Bioscience Industry Employment	85,210	1,743,639	I
Bioscience Industry Location Quotient	1.16	n/a	II
Bioscience Industry Establishments	3,778	85,702	I
<b>Academic Bioscience R&amp;D Expenditures, FY 2016</b>			
Bioscience R&D (\$ thousands)	\$1,429,861	\$41,972,205	I
Bioscience Share of Total R&D	63%	62%	III
Bioscience R&D Per Capita	\$111	\$130	III
<b>NIH Funding, FY 2017</b>			
Funding (\$ thousands)	\$805,535	\$26,150,485	I
Funding Per Capita	\$63	\$80	III
<b>Bioscience Venture Capital Investments, 2014-17 (\$ millions)</b>	\$1,585.58	\$66,168.62	I
<b>Bioscience and Related Patents, 2014-17</b>	4,355	102,862	I

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	Illinois		United States	
	2016	2014-2016 Change	2016	2014-2016 Change
<b>Agricultural Feedstock and Industrial Biosciences</b>				
Establishments	82	-14.6%	1,709	-3.2%
Employment	8,529	1.2%	68,027	-1.2%
Location Quotient	2.97		n/a	
Direct-Effect Employment Multiplier	11.48			
Total Employment Impact	97,902			
Average Annual Wage	\$101,380	6.8%	\$80,961	2.7%
<b>Bioscience-Related Distribution</b>				
Establishments	1,881	-3.9%	39,149	3.8%
Employment	26,058	1.4%	469,640	3.7%
Location Quotient	1.31		n/a	
Direct-Effect Employment Multiplier	2.38			
Total Employment Impact	62,069			
Average Annual Wage	\$101,596	7.0%	\$93,677	2.7%
<b>Drugs and Pharmaceuticals</b>				
Establishments	185	22.5%	3,754	13.7%
Employment	20,102	9.0%	299,113	2.0%
Location Quotient	1.59		n/a	
Direct-Effect Employment Multiplier	6.93			
Total Employment Impact	139,407			
Average Annual Wage	\$162,502	-3.3%	\$113,815	-3.2%
<b>Medical Devices and Equipment</b>				
Establishments	550	18.0%	8,083	5.9%
Employment	12,950	7.5%	359,293	2.9%
Location Quotient	0.85		n/a	
Direct-Effect Employment Multiplier	3.39			
Total Employment Impact	43,843			
Average Annual Wage	\$125,715	28.1%	\$84,746	6.5%
<b>Research, Testing and Medical Laboratories</b>				
Establishments	1,080	6.7%	33,007	13.1%
Employment	17,572	0.6%	547,566	8.2%
Location Quotient	0.76		n/a	
Direct-Effect Employment Multiplier	2.49			
Total Employment Impact	43,690			
Average Annual Wage	\$102,488	-1.9%	\$106,942	5.5%
<b>Total Bioscience Industry</b>				
Establishments	3,778	2.6%	85,702	7.7%
Employment	85,210	3.8%	1,743,639	4.4%
Location Quotient	1.16		n/a	
Direct-Effect Employment Multiplier	4.54			
Total Employment Impact	386,911			
Average Annual Wage	\$119,792	5.2%	\$98,961	3.1%
<b>Total Private Sector</b>				
Establishments	379,332	-4.7%	9,243,034	3.4%
Employment	5,102,477	2.7%	120,884,570	4.2%
Average Annual Wage	\$56,866	4.7%	\$53,354	4.3%

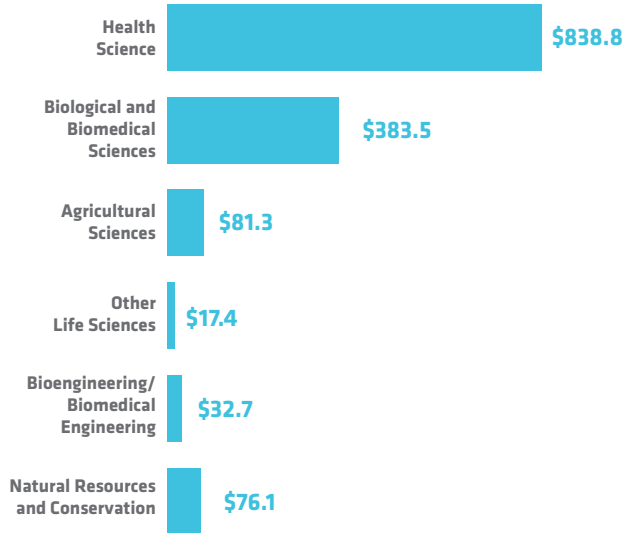
Note: U.S. employment metrics include Puerto Rico.

## Bioscience Research in Illinois

### Bioscience Academic R&D Expenditures

\$ Millions

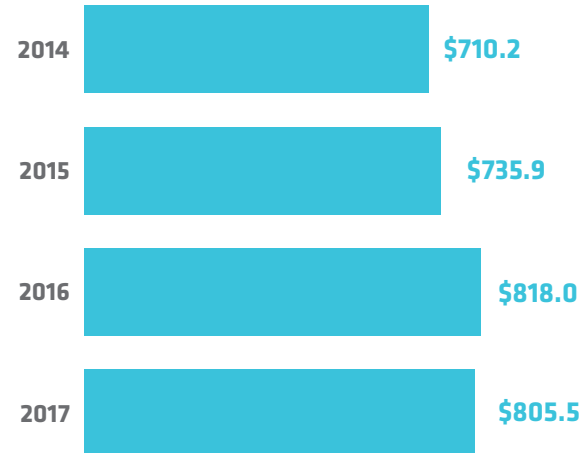
FY 2016



### NIH Awards

\$ Millions

FY 2014-2017

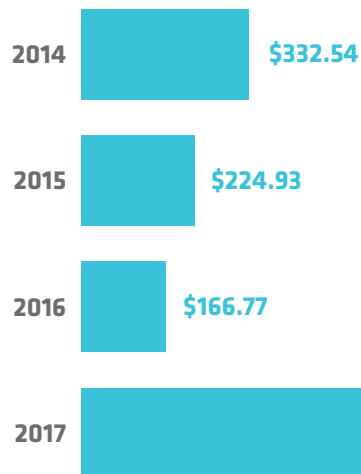


## Bioscience Venture Capital in Illinois

### Bioscience-Related Venture Capital Investments

\$ Millions

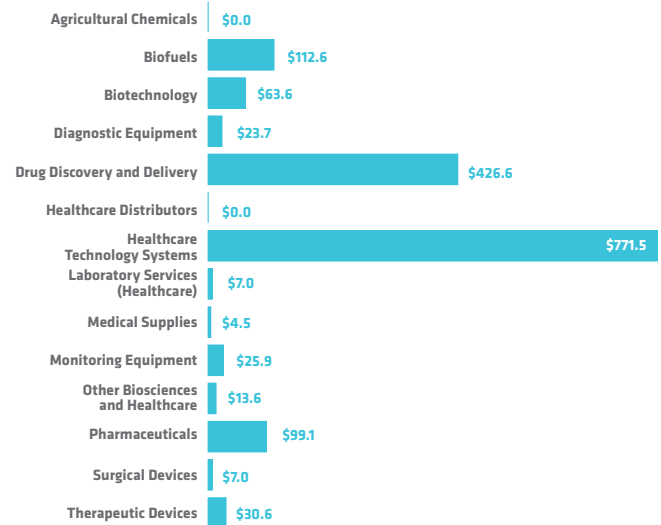
2014-2017



### Bioscience-Related Venture Capital Investments by Segment

\$ Millions

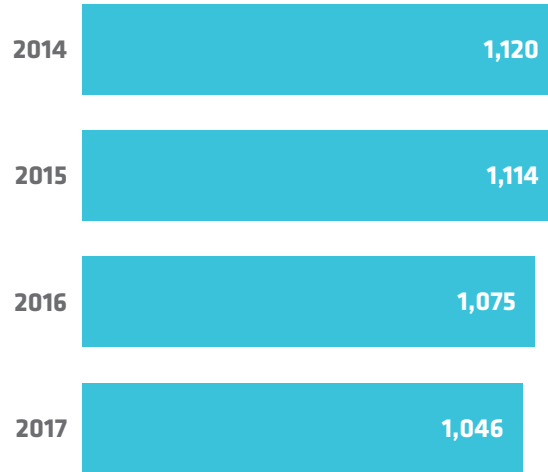
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## Bioscience Patents in Illinois

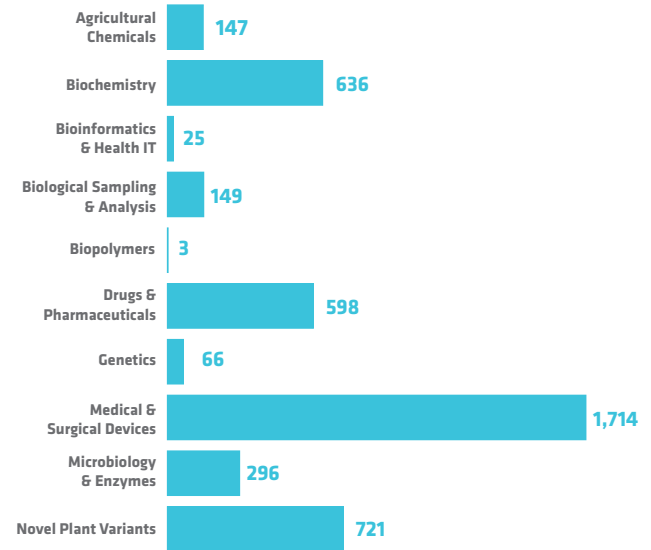
Bioscience-Related U.S. Patents

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.