



Utah’s bioscience industry is sizable, highly specialized, diverse in its strengths and growing rapidly in recent years. The state’s industry employment is one of the most highly concentrated in the nation, with a location quotient of 1.84. Bioscience firms operate 1,139 business establishments in the state that employ nearly 31,000. The state has seen employment growth of 12.1 percent since 2014, nearly three times the national average (4.4 percent). Four of the five major subsectors have contributed to industry employment growth since 2014 and three are highly specialized in their concentration—medical devices and equipment; drugs and pharmaceuticals; and research, testing and medical labs. In addition to a strong industrial presence, Utah has seen growth in bioscience-related venture capital, reaching nearly \$195 million in investments in 2017.

## Bioscience Performance Metrics

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

Metric	Utah	United States	Quintile
<b>Bioscience Industry, 2016</b>			
Bioscience Industry Employment	30,926	1,743,639	II
Bioscience Industry Location Quotient	1.84	n/a	I
Bioscience Industry Establishments	1,139	85,702	III
<b>Academic Bioscience R&amp;D Expenditures, FY 2016</b>			
Bioscience R&D (\$ thousands)	\$290,204	\$41,972,205	IV
Bioscience Share of Total R&D	54%	62%	IV
Bioscience R&D Per Capita	\$95	\$130	III
<b>NIH Funding, FY 2017</b>			
Funding (\$ thousands)	\$198,104	\$26,150,485	III
Funding Per Capita	\$64	\$80	III
<b>Bioscience Venture Capital Investments, 2014-17 (\$ millions)</b>	\$620.03	\$66,168.62	II
<b>Bioscience and Related Patents, 2014-17</b>	1,559	102,862	III

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	Utah		United States	
	2016	2014-2016 Change	2016	2014-2016 Change
<b>Agricultural Feedstock and Industrial Biosciences</b>				
Establishments	16	33.3%	1,709	-3.2%
Employment	167	-5.5%	68,027	-1.2%
Location Quotient	0.25		n/a	
Direct-Effect Employment Multiplier	5.69			
Total Employment Impact	947			
Average Annual Wage	\$67,480	10.7%	\$80,961	2.7%
<b>Bioscience-Related Distribution</b>				
Establishments	532	-0.6%	39,149	3.8%
Employment	4,837	5.2%	469,640	3.7%
Location Quotient	1.07		n/a	
Direct-Effect Employment Multiplier	2.34			
Total Employment Impact	11,339			
Average Annual Wage	\$78,613	1.3%	\$93,677	2.7%
<b>Drugs and Pharmaceuticals</b>				
Establishments	93	13.4%	3,754	13.7%
Employment	6,590	17.0%	299,113	2.0%
Location Quotient	2.28		n/a	
Direct-Effect Employment Multiplier	6.49			
Total Employment Impact	42,758			
Average Annual Wage	\$60,924	4.2%	\$113,815	-3.2%
<b>Medical Devices and Equipment</b>				
Establishments	158	17.0%	8,083	5.9%
Employment	11,677	9.2%	359,293	2.9%
Location Quotient	3.37		n/a	
Direct-Effect Employment Multiplier	2.99			
Total Employment Impact	34,935			
Average Annual Wage	\$61,276	5.4%	\$84,746	6.5%
<b>Research, Testing and Medical Laboratories</b>				
Establishments	340	19.5%	33,007	13.1%
Employment	7,656	17.8%	547,566	8.2%
Location Quotient	1.45		n/a	
Direct-Effect Employment Multiplier	2.35			
Total Employment Impact	17,965			
Average Annual Wage	\$64,917	-13.0%	\$106,942	5.5%
<b>Total Bioscience Industry</b>				
Establishments	1,139	8.6%	85,702	7.7%
Employment	30,926	12.1%	1,743,639	4.4%
Location Quotient	1.84		n/a	
Direct-Effect Employment Multiplier	3.49			
Total Employment Impact	107,944			
Average Annual Wage	\$64,847	-0.7%	\$98,961	3.1%
<b>Total Private Sector</b>				
Establishments	92,505	6.7%	9,243,034	3.4%
Employment	1,165,749	8.3%	120,884,570	4.2%
Average Annual Wage	\$45,274	5.3%	\$53,354	4.3%

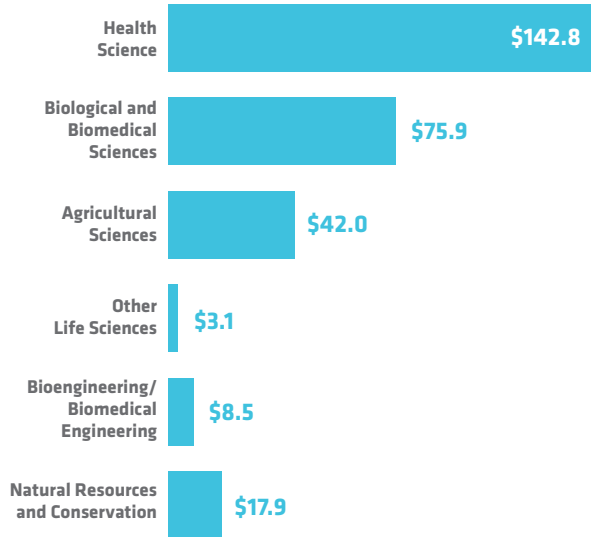
Note: U.S. employment metrics include Puerto Rico.

## Bioscience Research in Utah

### Bioscience Academic R&D Expenditures

\$ Millions

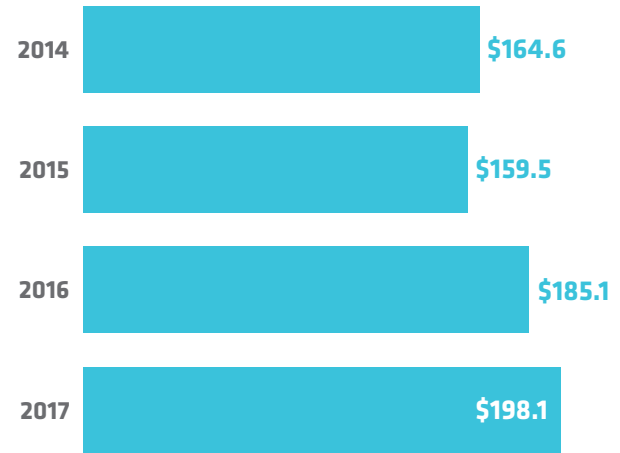
FY 2016



### NIH Awards

\$ Millions

FY 2014-2017

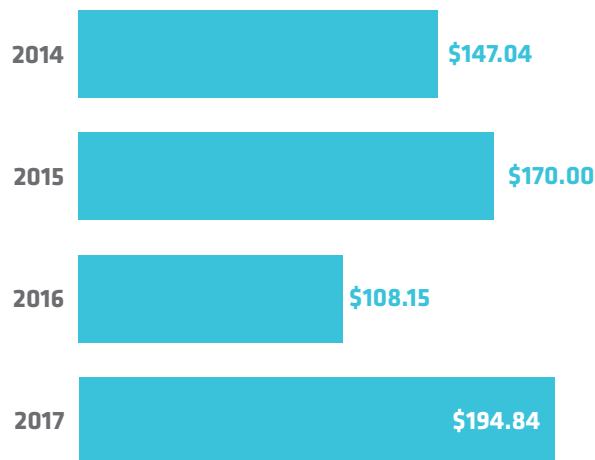


## Bioscience Venture Capital in Utah

### Bioscience-Related Venture Capital Investments

\$ Millions

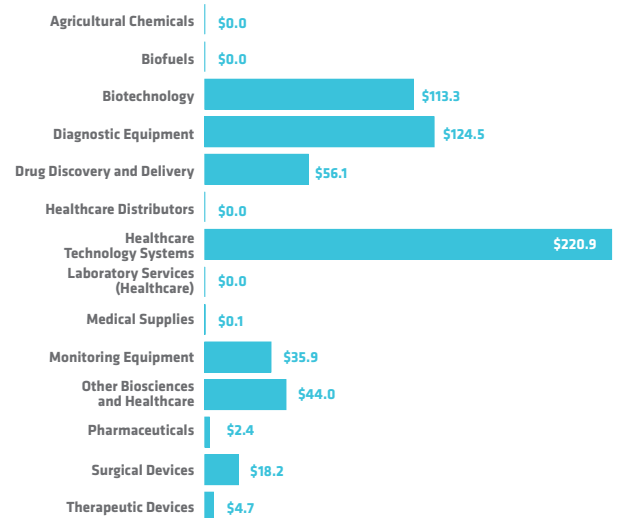
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### Bioscience-Related Venture Capital Investments by Segment

\$ Millions

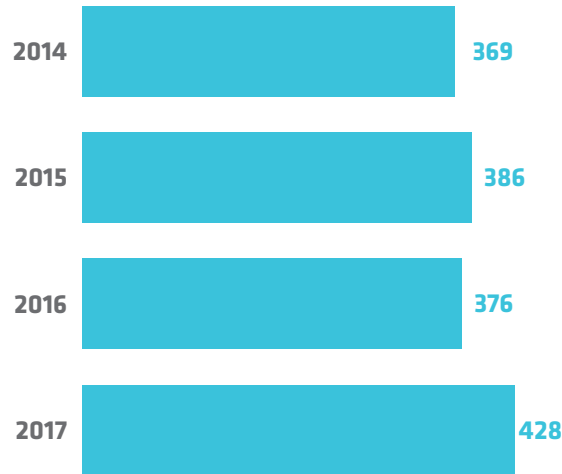
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## Bioscience Patents in Utah

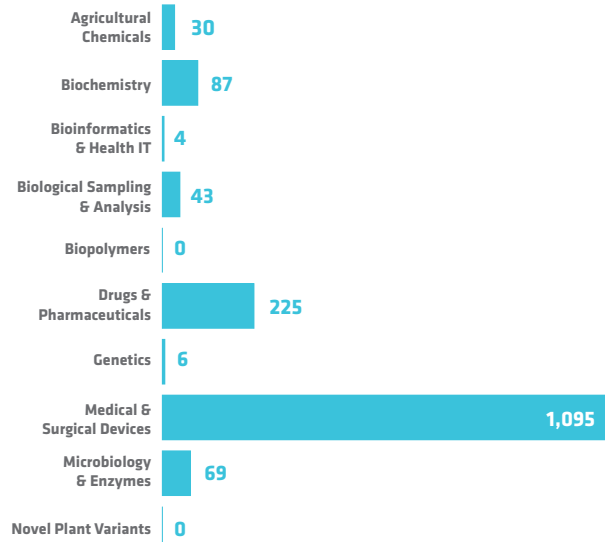
Bioscience-Related U.S. Patents

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.