



Colorado's bioscience industry is sizable and growing. The industry employed just under 30,000 in 2016 across 2,352 business establishments. All five of its major industry subsectors have increased employment since 2014, with an overall bioscience industry growth rate of 5.3 percent. Colorado has a specialized employment concentration in two subsectors—medical devices and equipment and bioscience-related distribution, both of which employ about 10,000 in the state. The state is among the top tier in venture capital funding for bioscience companies, with nearly \$1.2 billion invested since 2014. NIH funding to Colorado institutions has been increasing and reached \$359 million in FY 2017.

## Bioscience Performance Metrics

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

Metric	Colorado	United States	Quintile
<b>Bioscience Industry, 2016</b>			
Bioscience Industry Employment	29,998	1,743,639	II
Bioscience Industry Location Quotient	0.97	n/a	II
Bioscience Industry Establishments	2,352	85,702	II
<b>Academic Bioscience R&amp;D Expenditures, FY 2016</b>			
Bioscience R&D (\$ thousands)	\$675,657	\$41,972,205	II
Bioscience Share of Total R&D	51%	62%	IV
Bioscience R&D Per Capita	\$122	\$130	II
<b>NIH Funding, FY 2017</b>			
Funding (\$ thousands)	\$359,373	\$26,150,485	II
Funding Per Capita	\$64	\$80	II
<b>Bioscience Venture Capital Investments, 2014-17 (\$ millions)</b>	\$1,180.21	\$66,168.62	I
<b>Bioscience and Related Patents, 2014-17</b>	3,128	102,862	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	Colorado		United States	
	2016	2014-2016 Change	2016	2014-2016 Change
<b>Agricultural Feedstock and Industrial Biosciences</b>				
Establishments	25	13.6%	1,709	-3.2%
Employment	328	8.2%	68,027	-1.2%
Location Quotient	0.27		n/a	
Direct-Effect Employment Multiplier	4.76			
Total Employment Impact	1,562			
Average Annual Wage	\$55,219	-4.0%	\$80,961	2.7%
<b>Bioscience-Related Distribution</b>				
Establishments	1,335	23.8%	39,149	3.8%
Employment	10,200	9.8%	469,640	3.7%
Location Quotient	1.22		n/a	
Direct-Effect Employment Multiplier	2.42			
Total Employment Impact	24,725			
Average Annual Wage	\$104,583	4.5%	\$93,677	2.7%
<b>Drugs and Pharmaceuticals</b>				
Establishments	111	32.1%	3,754	13.7%
Employment	3,225	9.2%	299,113	2.0%
Location Quotient	0.61		n/a	
Direct-Effect Employment Multiplier	6.41			
Total Employment Impact	20,684			
Average Annual Wage	\$79,387	-19.7%	\$113,815	-3.2%
<b>Medical Devices and Equipment</b>				
Establishments	168	9.8%	8,083	5.9%
Employment	9,993	2.2%	359,293	2.9%
Location Quotient	1.57		n/a	
Direct-Effect Employment Multiplier	3.10			
Total Employment Impact	30,929			
Average Annual Wage	\$82,529	1.3%	\$84,746	6.5%
<b>Research, Testing and Medical Laboratories</b>				
Establishments	713	13.2%	33,007	13.1%
Employment	6,252	1.6%	547,566	8.2%
Location Quotient	0.64		n/a	
Direct-Effect Employment Multiplier	2.35			
Total Employment Impact	14,686			
Average Annual Wage	\$80,662	0.7%	\$106,942	5.5%
<b>Total Bioscience Industry</b>				
Establishments	2,352	19.6%	85,702	7.7%
Employment	29,998	5.3%	1,743,639	4.4%
Location Quotient	0.97		n/a	
Direct-Effect Employment Multiplier	3.09			
Total Employment Impact	92,586			
Average Annual Wage	\$89,002	0.3%	\$98,961	3.1%
<b>Total Private Sector</b>				
Establishments	187,873	8.8%	9,243,034	3.4%
Employment	2,146,986	6.0%	120,884,570	4.2%
Average Annual Wage	\$54,879	3.4%	\$53,354	4.3%

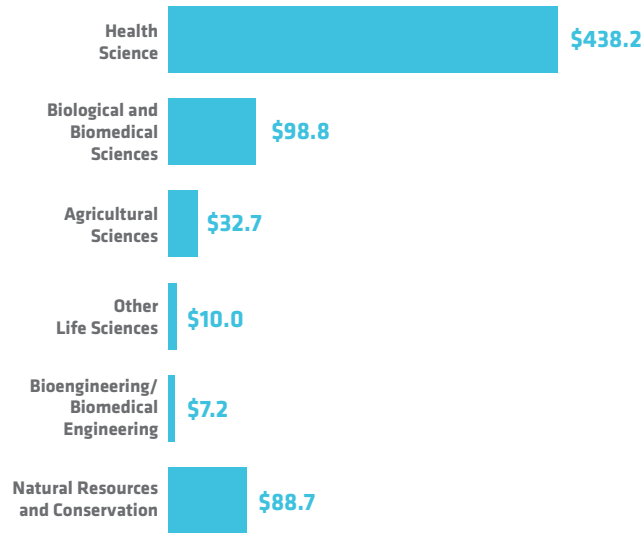
Note: U.S. employment metrics include Puerto Rico.

## Bioscience Research in Colorado

### Bioscience Academic R&D Expenditures

\$ Millions

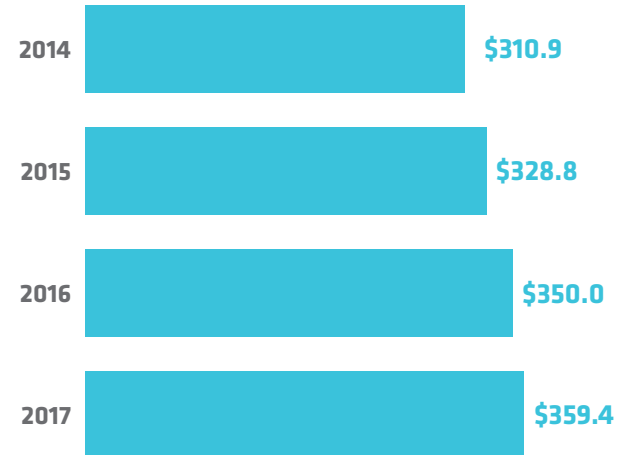
FY 2016



### NIH Awards

\$ Millions

FY 2014-2017

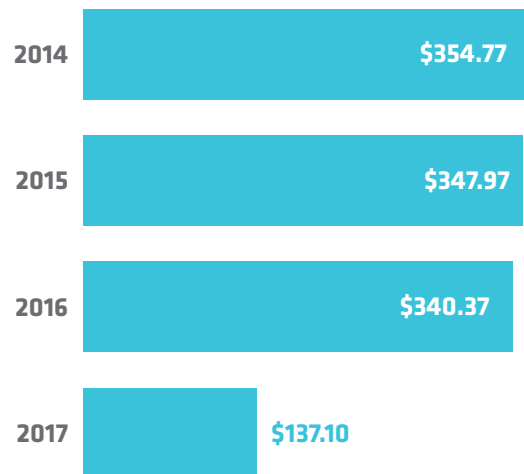


## Bioscience Venture Capital in Colorado

### Bioscience-Related Venture Capital Investments

\$ Millions

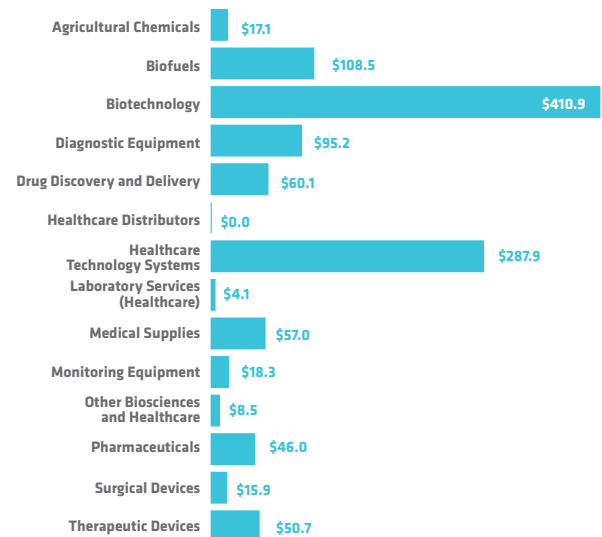
2014-2017



### Bioscience-Related Venture Capital Investments by Segment

\$ Millions

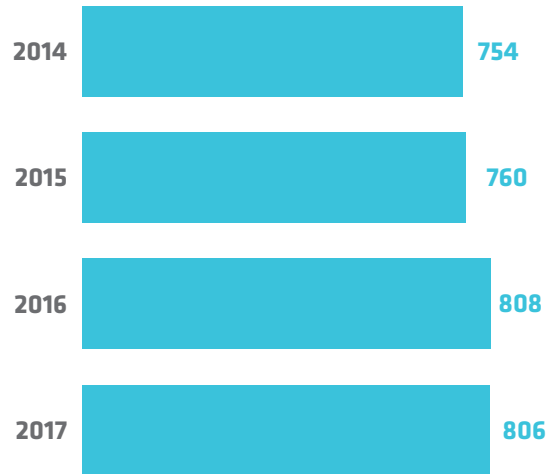
2014-2017



## Bioscience Patents in Colorado

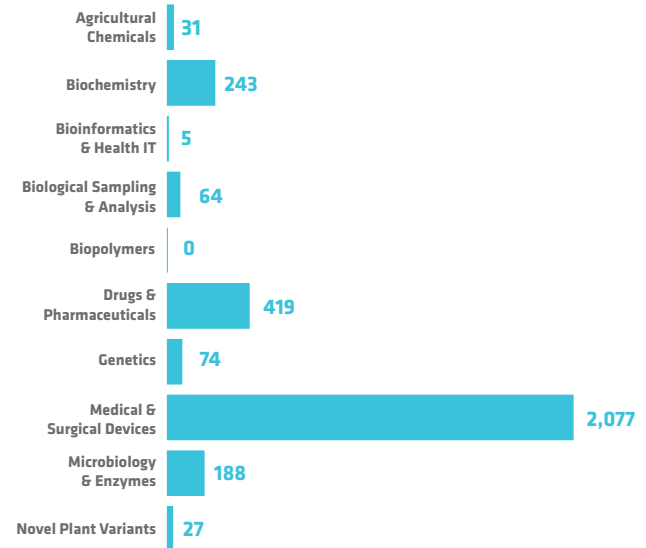
Bioscience-Related U.S. Patents

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.