



Wyoming’s bioscience industry employed more than 900 across 156 business establishments in 2016. The state has a specialized employment concentration in the agricultural feedstock and industrial biosciences subsector with a location quotient of 2.41. NIH funding awarded to Wyoming institutions has grown from \$7.5 million in 2014 to \$12.4 million in 2017.

## Bioscience Performance Metrics

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

Metric	Wyoming	United States	Quintile
<b>Bioscience Industry, 2016</b>			
Bioscience Industry Employment	934	1,743,639	V
Bioscience Industry Location Quotient	0.32	n/a	V
Bioscience Industry Establishments	156	85,702	V
<b>Academic Bioscience R&amp;D Expenditures, FY 2016</b>			
Bioscience R&D (\$ thousands)	\$46,064	\$41,972,205	V
Bioscience Share of Total R&D	42%	62%	V
Bioscience R&D Per Capita	\$79	\$130	IV
<b>NIH Funding, FY 2017</b>			
Funding (\$ thousands)	\$12,437	\$26,150,485	V
Funding Per Capita	\$21	\$80	V
<b>Bioscience Venture Capital Investments, 2014-17 (\$ millions)</b>	\$15.08	\$66,168.62	V
<b>Bioscience and Related Patents, 2014-17</b>	106	102,862	V

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	Wyoming		United States	
	2016	2014-2016 Change	2016	2014-2016 Change
<b>Agricultural Feedstock and Industrial Biosciences</b>				
Establishments	3	-40.0%	1,709	-3.2%
Employment	278	-14.6%	68,027	-1.2%
Location Quotient	2.41		n/a	
Direct-Effect Employment Multiplier	4.86			
Total Employment Impact	1,353			
Average Annual Wage	\$99,972	-4.9%	\$80,961	2.7%
<b>Bioscience-Related Distribution</b>				
Establishments	81	-1.1%	39,149	3.8%
Employment	255	-16.9%	469,640	3.7%
Location Quotient	0.32		n/a	
Direct-Effect Employment Multiplier	1.84			
Total Employment Impact	469			
Average Annual Wage	\$61,932	-48.3%	\$93,677	2.7%
<b>Drugs and Pharmaceuticals</b>				
Establishments	9	0.0%	3,754	13.7%
Employment	191	1.1%	299,113	2.0%
Location Quotient	0.38		n/a	
Direct-Effect Employment Multiplier	3.47			
Total Employment Impact	663			
Average Annual Wage	\$63,880	-0.8%	\$113,815	-3.2%
<b>Medical Devices and Equipment</b>				
Establishments	6	-40.0%	8,083	5.9%
Employment	32	19.0%	359,293	2.9%
Location Quotient	0.05		n/a	
Direct-Effect Employment Multiplier	1.84			
Total Employment Impact	58			
Average Annual Wage	\$61,076	21.1%	\$84,746	6.5%
<b>Research, Testing and Medical Laboratories</b>				
Establishments	57	10.0%	33,007	13.1%
Employment	177	-7.0%	547,566	8.2%
Location Quotient	0.19		n/a	
Direct-Effect Employment Multiplier	1.75			
Total Employment Impact	310			
Average Annual Wage	\$46,739	-27.5%	\$106,942	5.5%
<b>Total Bioscience Industry</b>				
Establishments	156	-1.1%	85,702	7.7%
Employment	934	-10.1%	1,743,639	4.4%
Location Quotient	0.32		n/a	
Direct-Effect Employment Multiplier	3.06			
Total Employment Impact	2,853			
Average Annual Wage	\$70,747	-24.1%	\$98,961	3.1%
<b>Total Private Sector</b>				
Establishments	24,655	2.6%	9,243,034	3.4%
Employment	205,004	-6.0%	120,884,570	4.2%
Average Annual Wage	\$43,810	-5.6%	\$53,354	4.3%

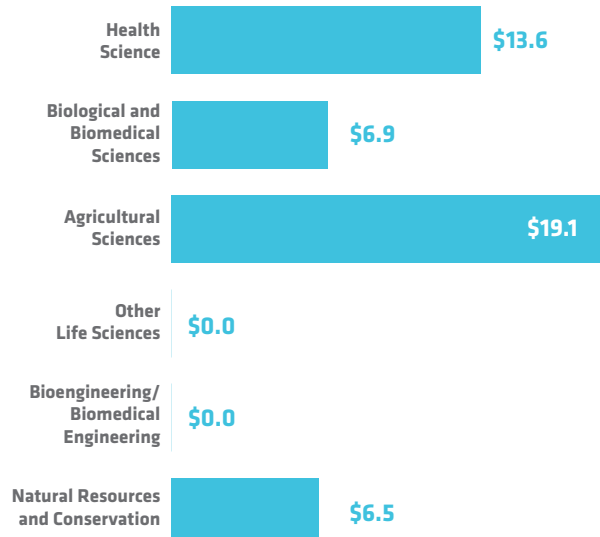
Note: U.S. employment metrics include Puerto Rico.

## Bioscience Research in Wyoming

### Bioscience Academic R&D Expenditures

\$ Millions

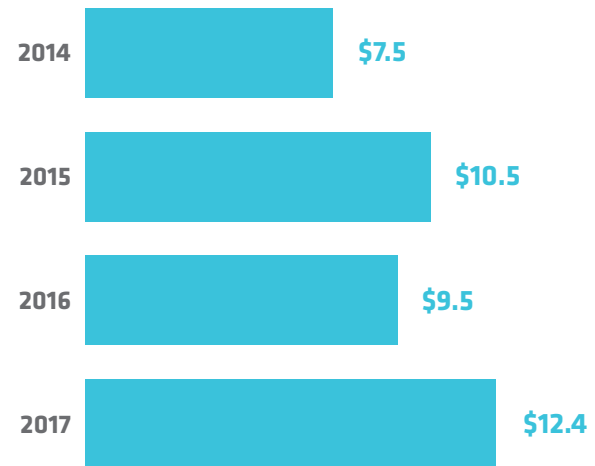
FY 2016



### NIH Awards

\$ Millions

FY 2014-2017

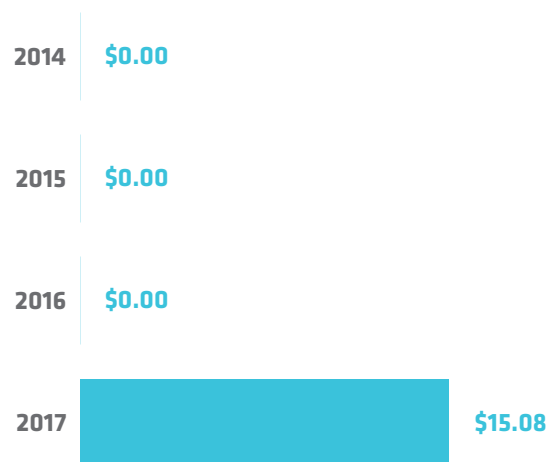


## Bioscience Venture Capital in Wyoming

### Bioscience-Related Venture Capital Investments

\$ Millions

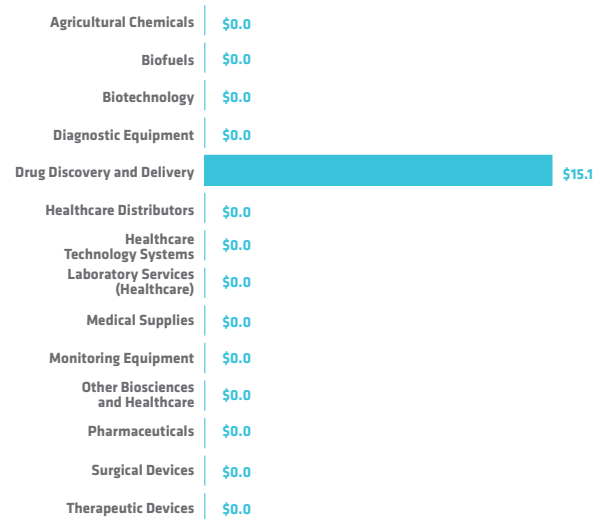
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### Bioscience-Related Venture Capital Investments by Segment

\$ Millions

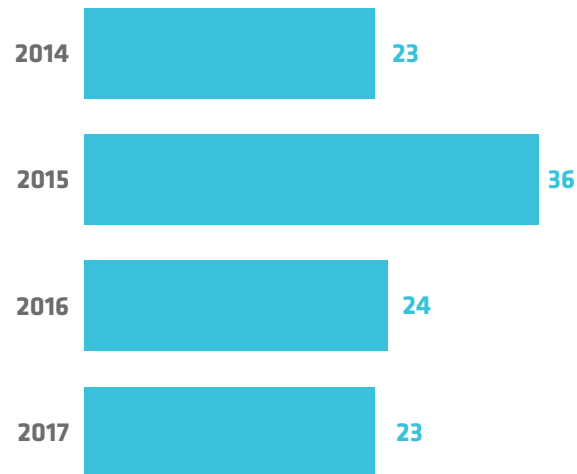
2014-2017



## Bioscience Patents in Wyoming

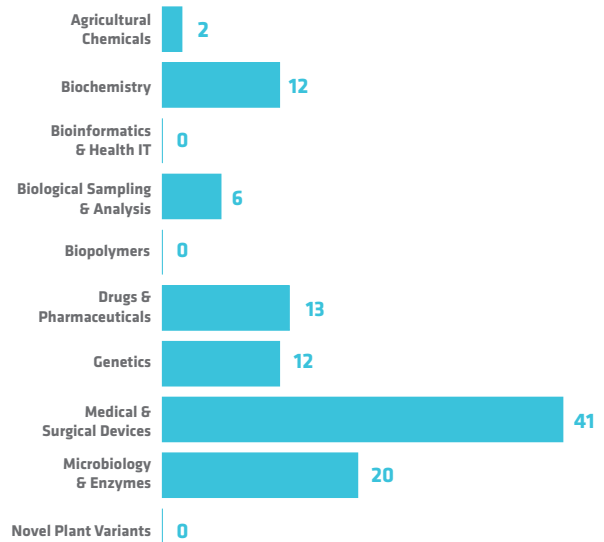
Bioscience-Related U.S. Patents

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.