



Alaska's bioscience industry is modest in size, at 1,005 jobs and 118 individual business establishments. The largest employing subsectors in the state are research, testing and medical laboratories at 578 jobs and bioscience-related distribution at 324 jobs. While overall Alaska's bioscience industry did not grow from 2014 through 2016, its medical device and equipment subsector added jobs. Bioscience jobs pay well above the average private sector wage with bioscience workers earning \$63,222, on average, compared with \$52,364 for the private sector. NIH funding to state institutions has steadily grown in recent years, reaching \$16.8 million in FY 2017.

## Bioscience Performance Metrics

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

Metric	Alaska	United States	Quintile
<b>Bioscience Industry, 2016</b>			
Bioscience Industry Employment	1,005	1,743,639	V
Bioscience Industry Location Quotient	0.28	n/a	V
Bioscience Industry Establishments	118	85,702	V
<b>Academic Bioscience R&amp;D Expenditures, FY 2016</b>			
Bioscience R&D (\$ thousands)	\$32,935	\$41,972,205	V
Bioscience Share of Total R&D	20%	62%	V
Bioscience R&D Per Capita	\$44	\$130	V
<b>NIH Funding, FY 2017</b>			
Funding (\$ thousands)	\$16,808	\$26,150,485	V
Funding Per Capita	\$23	\$80	V
<b>Bioscience Venture Capital Investments, 2014-17 (\$ millions)</b>	\$1.38	\$66,168.62	V
<b>Bioscience and Related Patents, 2014-17</b>	71	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	Alaska		United States	
	2016	2014-2016 Change	2016	2014-2016 Change
<b>Agricultural Feedstock and Industrial Biosciences</b>				
Establishments	2	0.0%	1,709	-3.2%
Employment	17	-32.9%	68,027	-1.2%
Location Quotient	0.12		n/a	
Direct-Effect Employment Multiplier	4.30			
Total Employment Impact	74			
Average Annual Wage	\$54,277	2.7%	\$80,961	2.7%
<b>Bioscience-Related Distribution</b>				
Establishments	54	1.5%	39,149	3.8%
Employment	324	-7.1%	469,640	3.7%
Location Quotient	0.33		n/a	
Direct-Effect Employment Multiplier	1.78			
Total Employment Impact	576			
Average Annual Wage	\$68,797	5.2%	\$93,677	2.7%
<b>Drugs and Pharmaceuticals</b>				
Establishments	1	100%	3,754	13.7%
Employment	1	100%	299,113	2.0%
Location Quotient	0.00		n/a	
Direct-Effect Employment Multiplier	1.89			
Total Employment Impact	1			
Average Annual Wage	\$72,388	-	\$113,815	-3.2%
<b>Medical Devices and Equipment</b>				
Establishments	11	0.0%	8,083	5.9%
Employment	85	3.8%	359,293	2.9%
Location Quotient	0.12		n/a	
Direct-Effect Employment Multiplier	2.22			
Total Employment Impact	190			
Average Annual Wage	\$87,174	29.7%	\$84,746	6.5%
<b>Research, Testing and Medical Laboratories</b>				
Establishments	51	-9.2%	33,007	13.1%
Employment	578	-10.2%	547,566	8.2%
Location Quotient	0.51		n/a	
Direct-Effect Employment Multiplier	2.00			
Total Employment Impact	1,159			
Average Annual Wage	\$56,826	-1.5%	\$106,942	5.5%
<b>Total Bioscience Industry</b>				
Establishments	118	-2.7%	85,702	7.7%
Employment	1,005	-8.7%	1,743,639	4.4%
Location Quotient	0.28		n/a	
Direct-Effect Employment Multiplier	1.99			
Total Employment Impact	2,001			
Average Annual Wage	\$63,222	4.1%	\$98,961	3.1%
<b>Total Private Sector</b>				
Establishments	19,657	1.2%	9,243,034	3.4%
Employment	249,660	-1.2%	120,884,570	4.2%
Average Annual Wage	\$52,364	-0.6%	\$53,354	4.3%

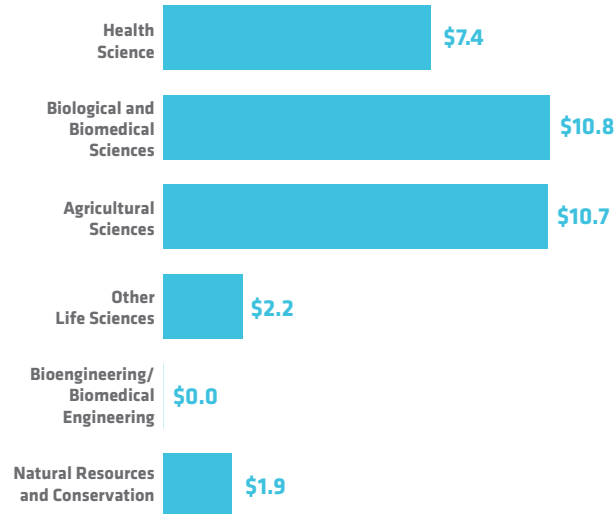
Note: U.S. employment metrics include Puerto Rico.

## Bioscience Research in Alaska

### Bioscience Academic R&D Expenditures

\$ Millions

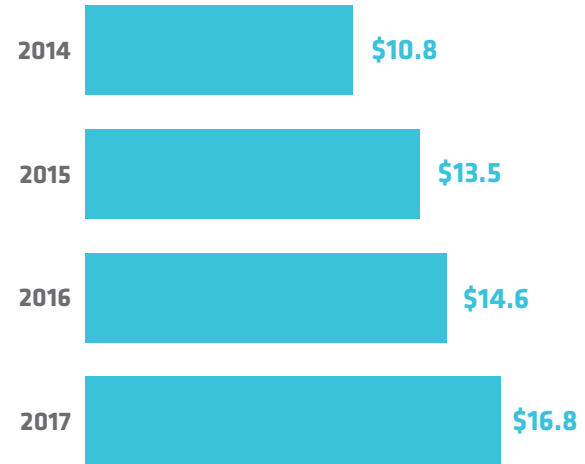
FY 2016



### NIH Awards

\$ Millions

FY 2014-2017

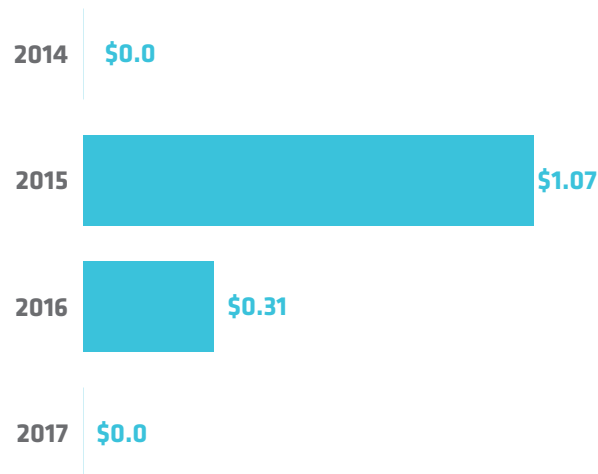


## Bioscience Venture Capital in Alaska

### Bioscience-Related Venture Capital Investments

\$ Millions

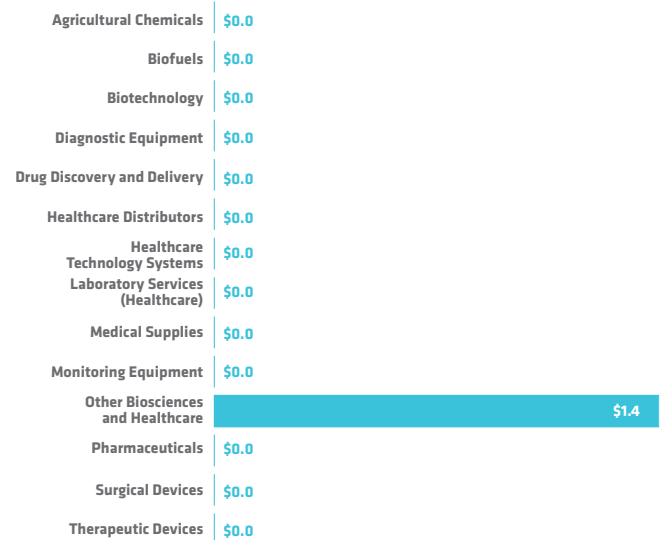
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### Bioscience-Related Venture Capital Investments by Segment

\$ Millions

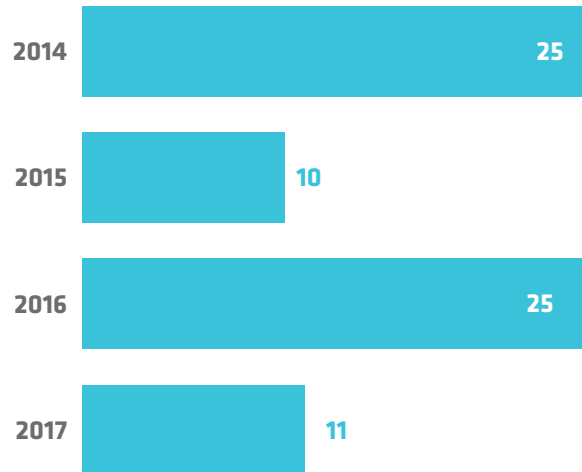
2014-2017



## Bioscience Patents in Alaska

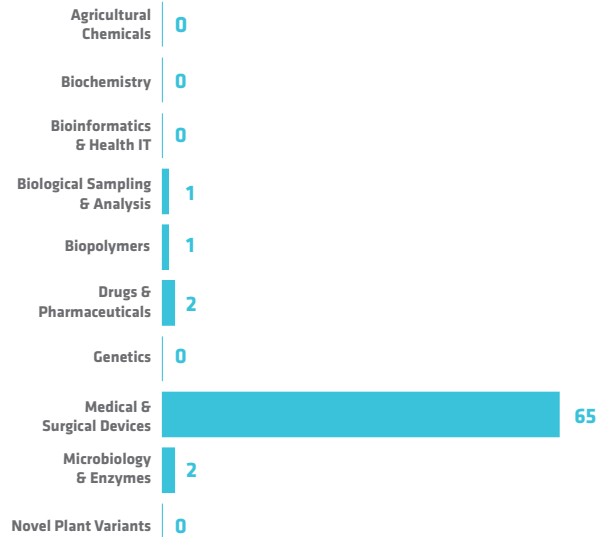
Bioscience-Related U.S. Patents

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.