



Rhode Island has a modest presence in the biosciences, with industry firms employing 4,736 in 2016 across 356 state establishments. The industry has a specialized employment concentration in drugs and pharmaceuticals, with 34 percent more concentration compared with the national average (location quotient is 1.34); and an above-average concentration of jobs in medical devices and equipment. The industry has shed jobs since 2014, with employment down nearly 10 percent statewide. Rhode Island has a strong concentration in NIH awards to its research institutions with per capita funding at twice the national average. Its receipt of NIH funding has risen in recent years and totaled \$170.6 million in FY 2017.

Bioscience Performance Metrics

Summary of State Performance in Selected Bioscience-related Metrics

Metric	Rhode Island	United States	Quintile
Bioscience Industry, 2016			
Bioscience Industry Employment	4,736	1,743,639	V
Bioscience Industry Location Quotient	0.79	n/a	III
Bioscience Industry Establishments	356	85,702	V
Academic Bioscience R&D Expenditures, FY 2016			
Bioscience R&D (\$ thousands)	\$136,636	\$41,972,205	IV
Bioscience Share of Total R&D	41%	62%	V
Bioscience R&D Per Capita	\$129	\$130	II
NIH Funding, FY 2017			
Funding (\$ thousands)	\$170,597	\$26,150,485	III
Funding Per Capita	\$161	\$80	I
Bioscience Venture Capital Investments, 2014-17 (\$ millions)			
	\$42.83	\$66,168.62	IV
Bioscience and Related Patents, 2014-17			
	720	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	Rhode Island		United States	
	2016	2014-2016 Change	2016	2014-2016 Change
Agricultural Feedstock and Industrial Biosciences				
Establishments	2	100.0%	1,709	-3.2%
Employment	122	74.1%	68,027	-1.2%
Location Quotient	0.52		n/a	
Direct-Effect Employment Multiplier	10.13			
Total Employment Impact	1,237			
Average Annual Wage	\$38,874	-2.2%	\$80,961	2.7%
Bioscience-Related Distribution				
Establishments	157	15.0%	39,149	3.8%
Employment	1,033	-12.4%	469,640	3.7%
Location Quotient	0.64		n/a	
Direct-Effect Employment Multiplier	2.20			
Total Employment Impact	2,274			
Average Annual Wage	\$87,394	7.3%	\$93,677	2.7%
Drugs and Pharmaceuticals				
Establishments	18	38.5%	3,754	13.7%
Employment	1,376	-4.3%	299,113	2.0%
Location Quotient	1.34		n/a	
Direct-Effect Employment Multiplier	5.87			
Total Employment Impact	8,074			
Average Annual Wage	\$120,901	3.4%	\$113,815	-3.2%
Medical Devices and Equipment				
Establishments	42	10.5%	8,083	5.9%
Employment	1,328	-18.5%	359,293	2.9%
Location Quotient	1.08		n/a	
Direct-Effect Employment Multiplier	2.71			
Total Employment Impact	3,599			
Average Annual Wage	\$73,405	12.5%	\$84,746	6.5%
Research, Testing and Medical Laboratories				
Establishments	137	12.5%	33,007	13.1%
Employment	877	-6.2%	547,566	8.2%
Location Quotient	0.47		n/a	
Direct-Effect Employment Multiplier	2.11			
Total Employment Impact	1,848			
Average Annual Wage	\$66,188	-0.1%	\$106,942	5.5%
Total Bioscience Industry				
Establishments	356	14.7%	85,702	7.7%
Employment	4,736	-9.8%	1,743,639	4.4%
Location Quotient	0.79		n/a	
Direct-Effect Employment Multiplier	3.60			
Total Employment Impact	17,031			
Average Annual Wage	\$88,029	6.2%	\$98,961	3.1%
Total Private Sector				
Establishments	36,152	3.1%	9,243,034	3.4%
Employment	415,168	2.6%	120,884,570	4.2%
Average Annual Wage	\$49,583	4.5%	\$53,354	4.3%

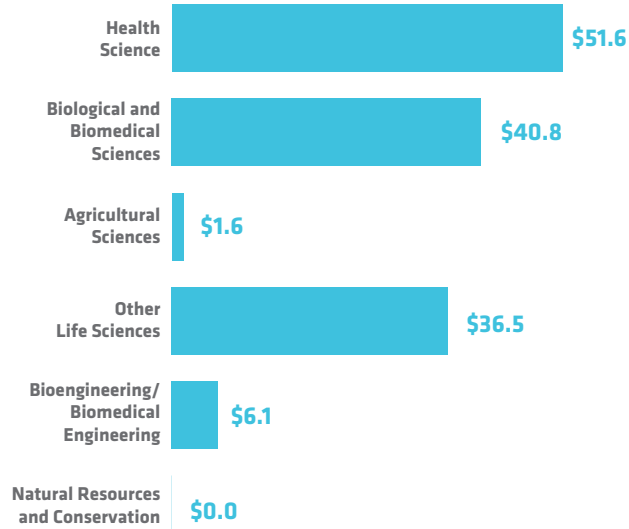
Note: U.S. employment metrics include Puerto Rico.

Bioscience Research in Rhode Island

Bioscience Academic R&D Expenditures

\$ Millions

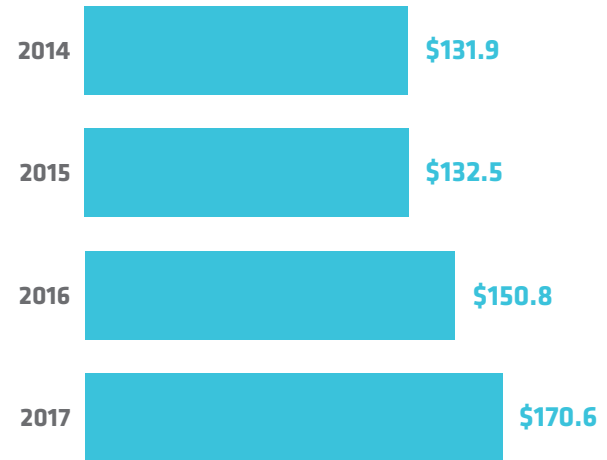
FY 2016



NIH Awards

\$ Millions

FY 2014-2017

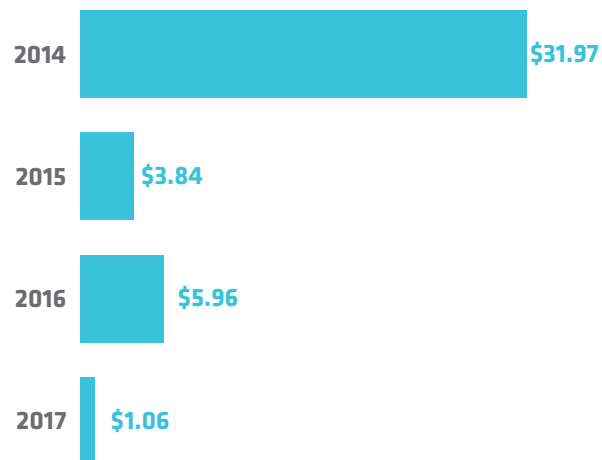


Bioscience Venture Capital in Rhode Island

Bioscience-Related Venture Capital Investments

\$ Millions

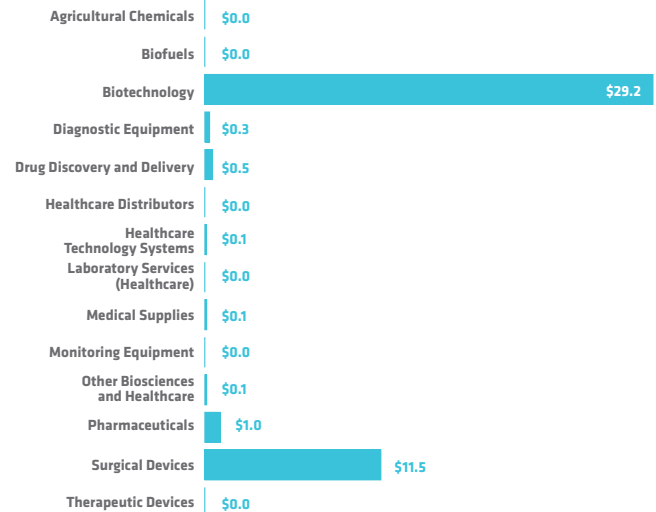
2014-2017



Bioscience-Related Venture Capital Investments by Segment

\$ Millions

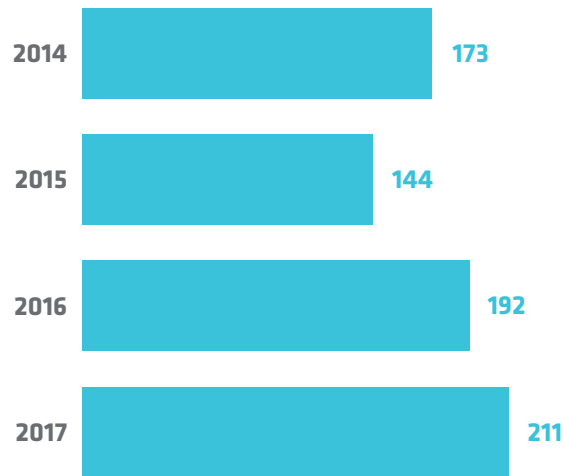
2014-2017



Bioscience Patents in Rhode Island

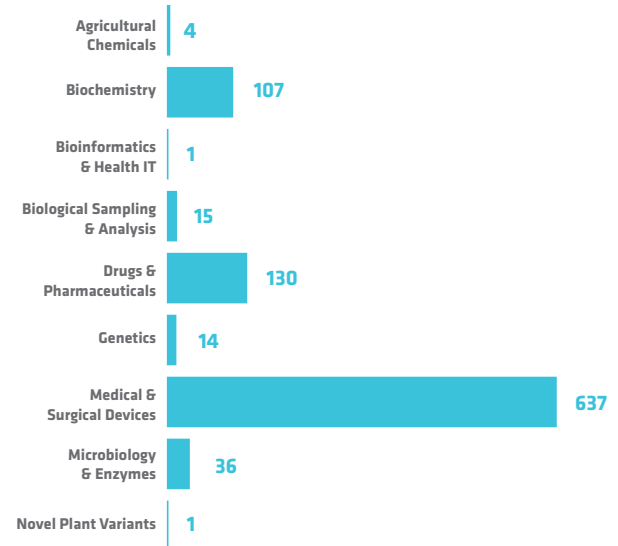
Bioscience-Related U.S. Patents

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.