



Puerto Rico has a sizable bioscience industry with a diverse set of industry strengths. In 2016, bioscience firms in the Commonwealth employed nearly 38,000 within 983 individual business establishments. While industry growth has been flat, two of the industry subsectors have added jobs since 2014—drugs and pharmaceuticals and medical device manufacturing. Puerto Rico is highly specialized in its employment concentration in the biosciences—its location quotient is 3.90. In addition, it has the distinction, along with New Jersey, of having a specialized employment concentration in four of the five major bioscience subsectors, representing the importance of the industry to the Commonwealth’s economy and the diversity of industry niches. Despite its industry strength and size, Puerto Rico lags most states in key measures of the innovation ecosystem.

Bioscience Performance Metrics

Summary of State Performance in Selected Bioscience-related Metrics

Metric	Puerto Rico	United States	Quintile
Bioscience Industry, 2016			
Bioscience Industry Employment	37,671	1,743,639	II
Bioscience Industry Location Quotient	3.90	n/a	I
Bioscience Industry Establishments	983	85,702	III
Academic Bioscience R&D Expenditures, FY 2016			
Bioscience R&D (\$ thousands)	\$71,297	\$41,972,205	V
Bioscience Share of Total R&D	61%	62%	III
Bioscience R&D Per Capita	\$21	\$130	V
NIH Funding, FY 2017			
Funding (\$ thousands)	\$43,230	\$26,150,485	V
Funding Per Capita	\$13	\$80	V
Bioscience Venture Capital Investments, 2014-17 (\$ millions)	\$1.23	\$66,168.62	V
Bioscience and Related Patents, 2014-17	76	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	Puerto Rico		United States	
	2016	2014-2016 Change	2016	2014-2016 Change
Agricultural Feedstock and Industrial Biosciences				
Establishments	4	-20.0%	1,709	-3.2%
Employment	358	-17.8%	68,027	-1.2%
Location Quotient	0.95		n/a	
Direct-Effect Employment Multiplier	2.33			
Total Employment Impact	834			
Average Annual Wage	\$66,427	9.7%	\$80,961	2.7%
Bioscience-Related Distribution				
Establishments	247	-3.7%	39,149	3.8%
Employment	5,130	-9.2%	469,640	3.7%
Location Quotient	1.97		n/a	
Direct-Effect Employment Multiplier	1.40			
Total Employment Impact	7,176			
Average Annual Wage	\$63,050	-3.2%	\$93,677	2.7%
Drugs and Pharmaceuticals				
Establishments	55	5.8%	3,754	13.7%
Employment	14,207	3.3%	299,113	2.0%
Location Quotient	8.57		n/a	
Direct-Effect Employment Multiplier	2.30			
Total Employment Impact	32,605			
Average Annual Wage	\$73,428	1.2%	\$113,815	-3.2%
Medical Devices and Equipment				
Establishments	55	3.8%	8,083	5.9%
Employment	12,956	1.4%	359,293	2.9%
Location Quotient	6.51		n/a	
Direct-Effect Employment Multiplier	1.58			
Total Employment Impact	20,491			
Average Annual Wage	\$43,331	6.2%	\$84,746	6.5%
Research, Testing and Medical Laboratories				
Establishments	622	-4.6%	33,007	13.1%
Employment	5,020	-2.1%	547,566	8.2%
Location Quotient	1.65		n/a	
Direct-Effect Employment Multiplier	1.53			
Total Employment Impact	7,694			
Average Annual Wage	\$27,505	2.5%	\$106,942	5.5%
Total Bioscience Industry				
Establishments	983	-3.5%	85,702	7.7%
Employment	37,671	-0.2%	1,743,639	4.4%
Location Quotient	3.90		n/a	
Direct-Effect Employment Multiplier	1.83			
Total Employment Impact	68,801			
Average Annual Wage	\$55,478	2.1%	\$98,961	3.1%
Total Private Sector				
Establishments	44,113	-5.8%	9,243,034	3.4%
Employment	669,838	-1.1%	120,884,570	4.2%
Average Annual Wage	\$26,079	1.8%	\$53,354	4.3%

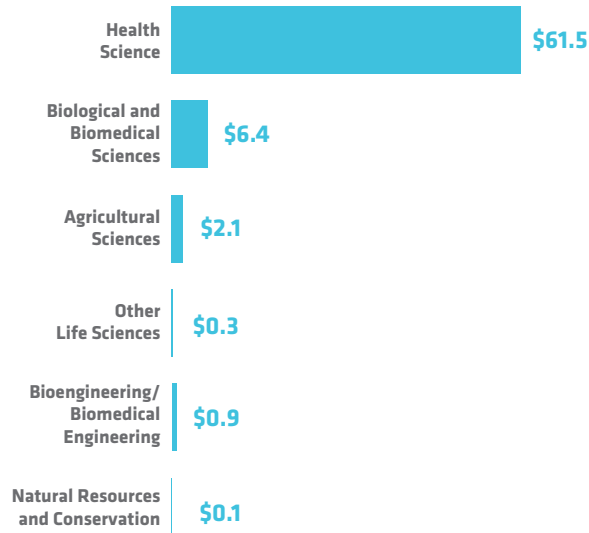
Note: U.S. employment metrics include Puerto Rico.

Bioscience Research in Puerto Rico

Bioscience Academic R&D Expenditures

\$ Millions

FY 2016



NIH Awards

\$ Millions

FY 2014-2017

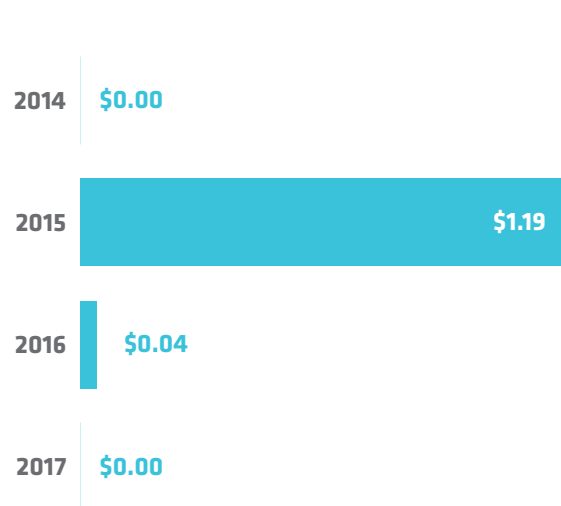


Bioscience Venture Capital in Puerto Rico

Bioscience-Related Venture Capital Investments

\$ Millions

2014-2017



Bioscience-Related Venture Capital Investments by Segment

\$ Millions

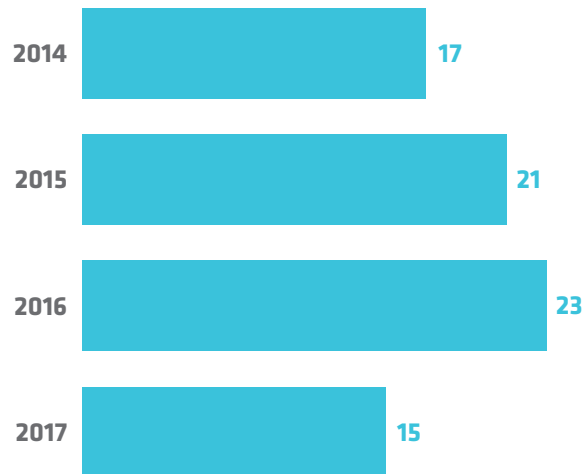
2014-2017



Bioscience Patents in Puerto Rico

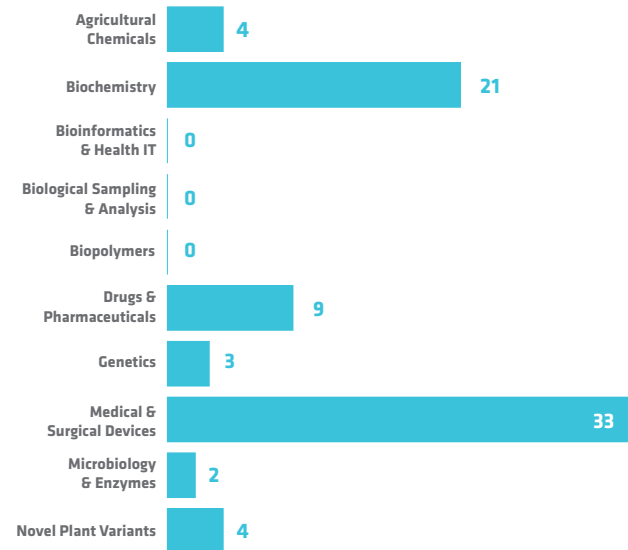
Bioscience-Related U.S. Patents

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.