



TEconomy/BIO

The Value of Bioscience Innovation in Growing Jobs and Improving Quality of Life 2016

Puerto Rico

Puerto Rico has a sizable, highly specialized, and diverse bioscience industry. Its bioscience companies employed nearly 38,000 in 2014 across 1,014 business establishments. Puerto Rico has a specialized employment concentration in the biosciences with a very high location quotient of 3.91 meaning the industry is nearly four times more concentrated in the territory relative to the U.S. average. Puerto Rico has an impressive distinction it shares only with New Jersey in its employment specialization in four of the five major industry subsectors—drugs and pharmaceuticals; medical devices; bioscience-related distribution; and research, testing, and medical labs. Average annual wages for Puerto Rico’s bioscience workers were \$54,500 in 2014, more than twice the average for the overall private sector.

Bioscience Performance Metrics

Summary of State Performance in Selected Bioscience-related Metrics

Metric	Puerto Rico	United States	Quintile
Bioscience Industry, 2014			
Bioscience Industry Employment	37,736	1,655,680	II
Bioscience Industry Location Quotient	3.91	n/a	I
Bioscience Industry Establishments	1,014	77,283	III
Academic Bioscience R&D Expenditures, FY 2014			
Bioscience R&D (\$ thousands)	\$64,917	\$38,873,926	V
Bioscience Share of Total R&D	60%	61%	III
Bioscience R&D Per Capita	\$18	\$122	V
NIH Funding, FY 2015			
Funding (\$ thousands)	\$46,255	\$22,869,746	IV
Funding Per Capita	\$13	\$71	V
Bioscience Venture Capital Investments, 2012–15 (\$ millions)	\$0.0	\$48,742.10	V
Bioscience and Related Patents, 2012–15	66	101,026	V

State ranking figures for bioscience performance metrics are calculated as quintiles, where:

top quintile – I II III IV V – bottom quintile

For source notes, see end of State Profile.



Puerto Rico

Industry Subsector	Puerto Rico		United States	
	2014	2012–2014 Change	2014	2012–2014 Change
Agricultural Feedstock and Chemicals				
Establishments	5	-27.3%	1,811	2.2%
Employment	454	28.2%	77,545	1.5%
Location Quotient	1.00		n/a	
Direct-Effect Employment Multiplier	3.5		18.4	
Total Employment Impact	1,567		1,432,125	
Average Annual Wage	\$60,754	-5.7%	\$80,640	6.3%
Bioscience-Related Distribution				
Establishments	255	-2.7%	37,833	2.8%
Employment	5,714	-8.5%	452,325	2.3%
Location Quotient	2.16		n/a	
Direct-Effect Employment Multiplier	1.6		3.0	
Total Employment Impact	9,303		1,358,820	
Average Annual Wage	\$65,381	3.9%	\$90,458	6.2%
Drugs and Pharmaceuticals				
Establishments	52	4.0%	3,301	8.0%
Employment	13,752	-5.3%	293,353	3.2%
Location Quotient	8.03		n/a	
Direct-Effect Employment Multiplier	4.8		11.0	
Total Employment Impact	65,674		3,242,627	
Average Annual Wage	\$72,556	8.4%	\$117,524	10.3%
Medical Devices and Equipment				
Establishments	53	-7.0%	7,636	5.5%
Employment	12,774	3.2%	349,045	-0.1%
Location Quotient	6.27		n/a	
Direct-Effect Employment Multiplier	2.6		4.6	
Total Employment Impact	32,826		1,596,802	
Average Annual Wage	\$40,817	8.1%	\$79,537	5.1%
Research, Testing, and Medical Laboratories				
Establishments	649	3.9%	26,702	10.2%
Employment	5,043	3.8%	483,412	3.4%
Location Quotient	1.79		n/a	
Direct-Effect Employment Multiplier	1.2		3.1	
Total Employment Impact	6,286		1,554,719	
Average Annual Wage	\$27,031	4.3%	\$97,485	6.8%
Total Bioscience Industry				
Establishments	1,014	1.3%	77,283	5.7%
Employment	37,736	-1.6%	1,655,680	2.2%
Location Quotient	3.91		n/a	
Direct-Effect Employment Multiplier	3.1		5.5	
Total Employment Impact	115,656		9,185,094	
Average Annual Wage	\$54,500	5.5%	\$94,543	7.2%
Total Private Sector				
Establishments	46,820	-3.5%	8,937,672	2.7%
Employment	677,064	-0.9%	116,018,300	4.4%
Average Annual Wage	\$25,607	1.6%	\$51,148	4.3%

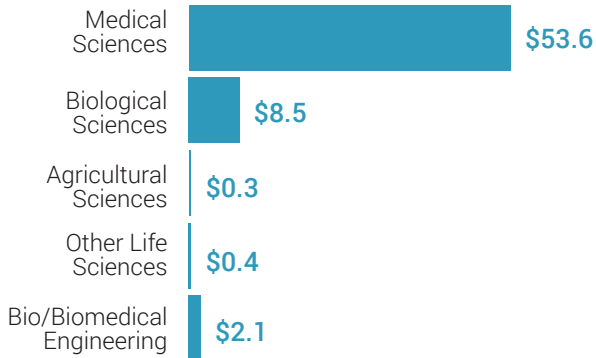
Note: U.S. employment metrics include Puerto Rico.



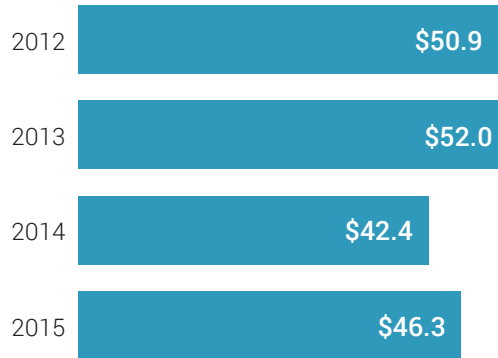
Puerto Rico

Bioscience Research in Puerto Rico

Bioscience Academic R&D Expenditures
\$ Millions
FY 2014



NIH Awards
\$ Millions
FY 2012-2015

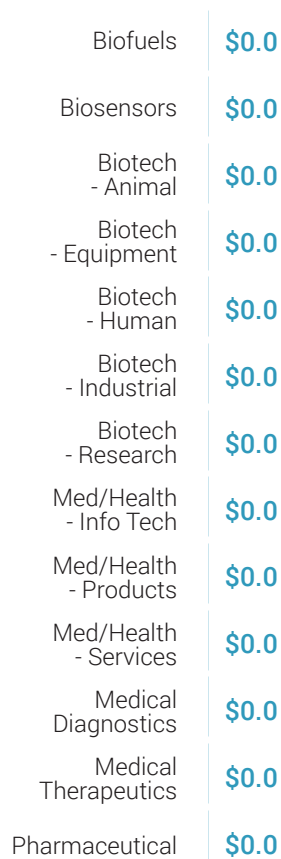


Bioscience Venture Capital in Puerto Rico

Bioscience-Related Venture
Capital Investments
\$ Millions
2012-2015



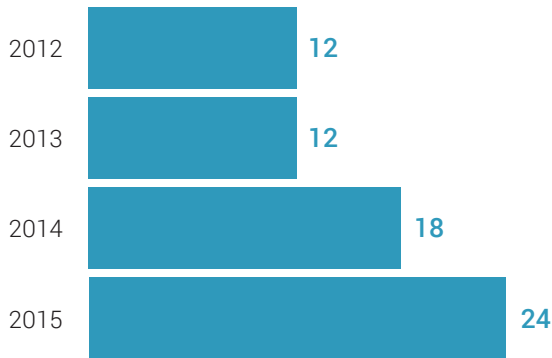
Bioscience-Related Venture
Capital Investments by Segment
\$ Millions
2012-2015



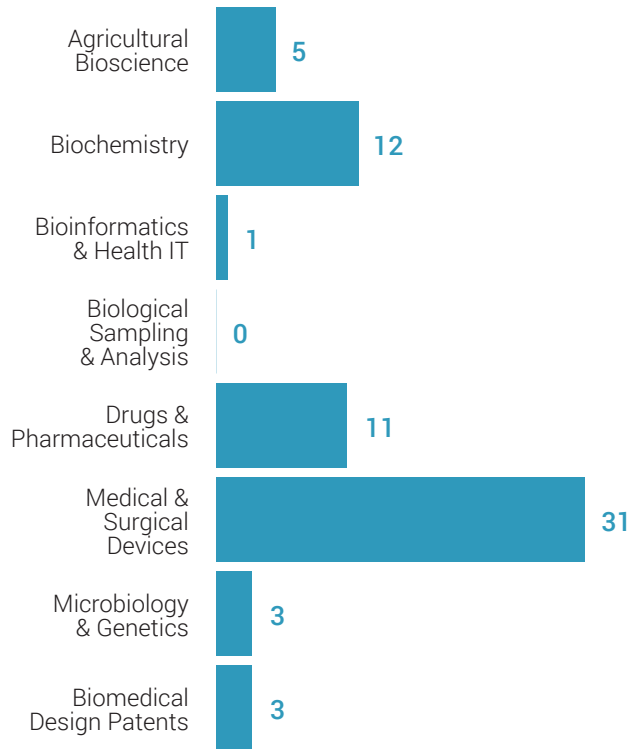


Bioscience Patents in Puerto Rico

**Bioscience-Related U.S. Patents
2012-2015**



**Bioscience-Related U.S. Patents by Segment
2012-2015**



Source Notes

Employment, Establishments, and Wages: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW), enhanced file from the IMPLAN Group, LLC.

Employment Multipliers: IMPLAN Group, LLC 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: Thomson Reuters Thomson ONE venture capital database.

Patents: U.S. Patent & Trademark Office data from Thomson Reuters Thomson Innovation patent analysis database.

For a more detailed discussion of the data and methodology used, please see the Appendix to the full national report.

