NEW JERSEY

Investment, Innovation and Job Creation in a Growing U.S. Bioscience Industry 2018

New Jersey is among the national leaders in the biosciences with a very large, highly specialized and diverse industry base that has seen moderate growth in recent years. Industry firms grew their employment base by 2.6 percent from 2014 through 2016 to reach nearly 94,000 jobs that span 2,897 state business establishments. Growth in four of the industry's five major subsectors helped to more than offset a decline in the state's large drugs and pharmaceuticals subsector. New Jersey has a high degree of industry specialization with 94 percent greater concentration of bioscience industry employment relative to the nation (location quotient is 1.94). Further, the state stands out in its breadth of industry strengths with a specialized employment concentration in four of the five industry subsectors, a distinction that is shared only with Puerto Rico. The high concentration of industry is evident in the innovation activities of state inventors, who have been awarded 7,303 patents during the 2014 through 2017 period in bioscience-related technology classes. Venture capital investments have risen in recent years, reaching $320 million in 2017.

Bioscience Performance Metrics

Summary of State Performance in Selected Bioscience-related Metrics

Metric	New Jersey	United States	Quintile
Bioscience Industry, 2016			
Bioscience Industry Employment	93,824	1,743,639	I
Bioscience Industry Location Quotient	1.94	n/a	I
Bioscience Industry Establishments	2,897	85,702	I
Academic Bioscience R&D Expenditures, FY 2016			
Bioscience R&D ($ thousands)	$491,548	$41,972,205	III
Bioscience Share of Total R&D	46%	62%	V
Bioscience R&D Per Capita	$55	$130	V
NIH Funding, FY 2017			
Funding ($ thousands)	$241,012	$26,150,485	III
Funding Per Capita	$27	$80	IV
Bioscience Venture Capital Investments, 2014-17 ($ millions)	$1,098.71	$66,168.62	II
Bioscience and Related Patents, 2014-17	7,303	102,862	I

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.

NEW JERSEY

Industry Subsector	New Jersey		United States	
	2016	2014–2016 Change	2016	2014–2016 Change
Agricultural Feedstock and Industrial Biosciences				
Establishments	20	-33.3%	1,709	-3.2%
Employment	530	3.8%	68,027	-1.2%
Location Quotient	0.28		n/a	
Direct-Effect Employment Multiplier	6.71			
Total Employment Impact	3,558			
Average Annual Wage	$118,990	16.5%	$80,961	2.7%
Bioscience-Related Distribution				
Establishments	1,237	7.2%	39,149	3.8%
Employment	22,015	5.1%	469,640	3.7%
Location Quotient	1.69		n/a	
Direct-Effect Employment Multiplier	2.29			
Total Employment Impact	50,315			
Average Annual Wage	$146,333	3.6%	$93,677	2.7%
Drugs and Pharmaceuticals				
Establishments	268	8.1%	3,754	13.7%
Employment	22,846	-16.8%	299,113	2.0%
Location Quotient	2.75		n/a	
Direct-Effect Employment Multiplier	6.17			
Total Employment Impact	141,051			
Average Annual Wage	$153,754	-8.7%	$113,815	-3.2%
Medical Devices and Equipment				
Establishments	300	12.8%	8,083	5.9%
Employment	12,832	3.0%	359,293	2.9%
Location Quotient	1.28		n/a	
Direct-Effect Employment Multiplier	3.05			
Total Employment Impact	39,128			
Average Annual Wage	$119,569	6.1%	$84,746	6.5%
Research, Testing and Medical Laboratories				
Establishments	1,072	12.3%	33,007	13.1%
Employment	35,600	18.3%	547,566	8.2%
Location Quotient	2.34		n/a	
Direct-Effect Employment Multiplier	2.65			
Total Employment Impact	94,491			
Average Annual Wage	$157,054	12.7%	$106,942	5.5%
Total Bioscience Industry				
Establishments	2,897	9.2%	85,702	7.7%
Employment	93,824	2.6%	1,743,639	4.4%
Location Quotient	1.94		n/a	
Direct-Effect Employment Multiplier	3.50			
Total Employment Impact	328,544			
Average Annual Wage	$148,393	2.6%	$98,961	3.1%
Total Private Sector				
Establishments	245,321	2.0%	9,243,034	3.4%
Employment	3,360,755	3.6%	120,884,570	4.2%
Average Annual Wage	$62,436	3.8%	$53,354	4.3%

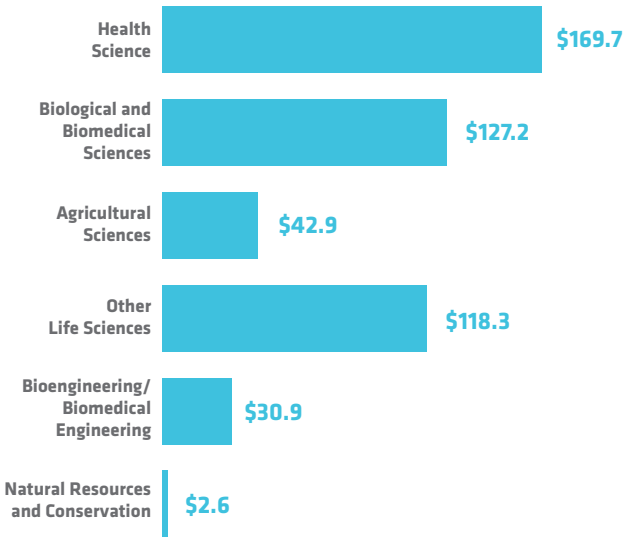
Note: U.S. employment metrics include Puerto Rico.

Bioscience Research in New Jersey

Bioscience Academic R&D Expenditures

$ Millions

FY 2016



NIH Awards

$ Millions

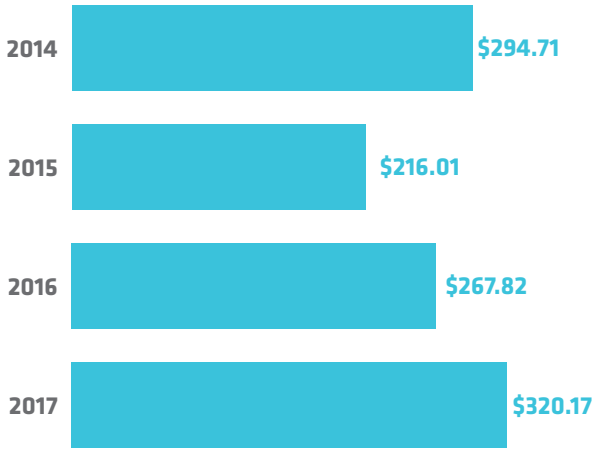
FY 2014-2017

Bioscience Venture Capital in New Jersey

Bioscience-Related Venture Capital Investments

$ Millions

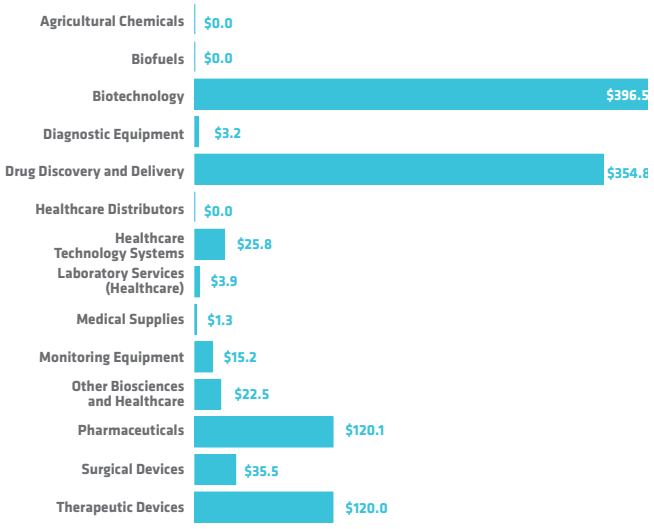
2014-2017



Bioscience-Related Venture Capital Investments by Segment

$ Millions

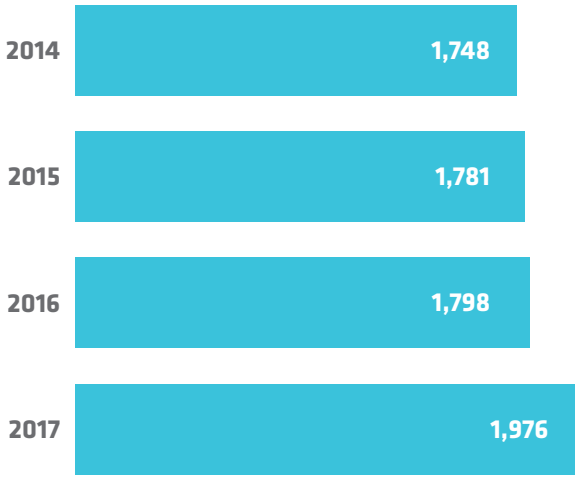
2014-2017



Bioscience Patents in New Jersey

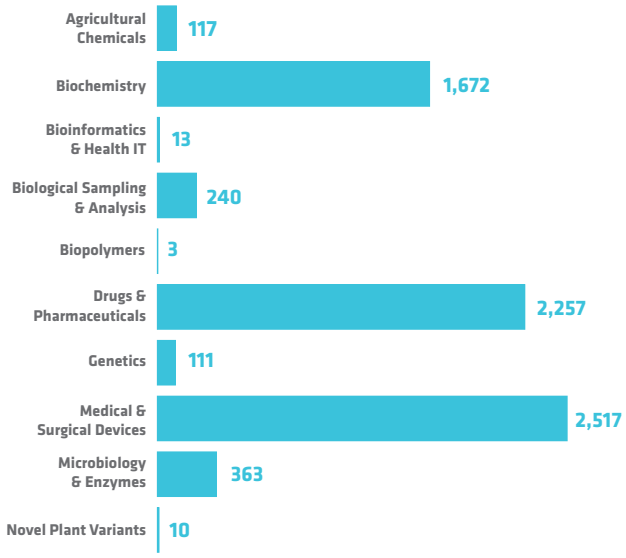
Bioscience-Related U.S. Patents

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.

TECONOMY PARTNERS LLC

Bio Biotechnology Innovation Organization

25 YEARS OF INNOVATION