TEConomy/BIO

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

New York

New York's large bioscience industry employed nearly 76,000 in 2014 while operating 3,054 business establishments across the state. While overall industry employment has been flat since 2012, two industry subsectors have added jobs—bioscience-related distribution and agricultural feedstock and chemicals. New York is among the top tier of states in measures of its bioscience innovation ecosystem. The state's research universities conducted $3.6 billion in bioscience academic R&D in 2014. New York institutions, both academic and non-academic, received $2 billion in funding from NIH in 2015. State inventors were issued 6,520 patents from 2012 through 2015 in bioscience-related technologies. Key areas of bioscience innovation include medical and surgical devices, drugs and pharmaceuticals, and biochemistry. Venture capital investments in New York bioscience companies have increased sharply in recent years and since 2012 have totaled $1.3 billion.

Bioscience Performance Metrics

Summary of State Performance in Selected Bioscience-related Metrics

Metric	New York	United States	Quintile
Bioscience Industry, 2014			
Bioscience Industry Employment	75,685	1,655,680	I
Bioscience Industry Location Quotient	0.71	n/a	IV
Bioscience Industry Establishments	3,054	77,283	I
Academic Bioscience R&D Expenditures, FY 2014			
Bioscience R&D ($ thousands)	$3,634,138	$38,873,926	I
Bioscience Share of Total R&D	67%	61%	II
Bioscience R&D Per Capita	$184	$122	I
NIH Funding, FY 2015			
Funding ($ thousands)	$2,046,828	$22,869,746	I
Funding Per Capita	$103	$71	I
Bioscience Venture Capital Investments, 2012–15 ($ millions)	$1,307.6	$48,742.10	I
Bioscience and Related Patents, 2012–15	6,520	101,026	I

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.

New York

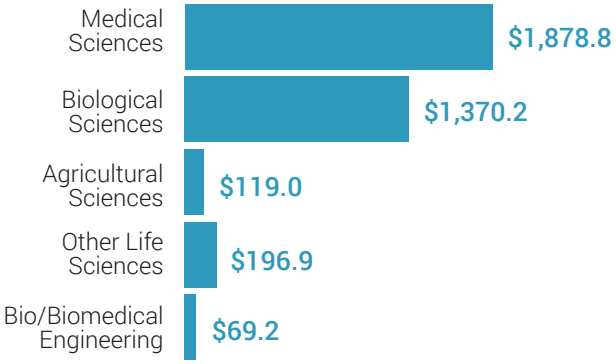
Industry Subsector	New York		United States	
	2014	2012–2014 Change	2014	2012–2014 Change
Agricultural Feedstock and Chemicals				
Establishments	39	-7.1%	1,811	2.2%
Employment	1,864	23.2%	77,545	1.5%
Location Quotient	0.37		n/a	
Direct-Effect Employment Multiplier	14.5		18.4	
Total Employment Impact	27,092		1,432,125	
Average Annual Wage	$74,063	7.9%	$80,640	6.3%
Bioscience-Related Distribution				
Establishments	1,403	4.2%	37,833	2.8%
Employment	16,859	2.6%	452,325	2.3%
Location Quotient	0.58		n/a	
Direct-Effect Employment Multiplier	2.8		3.0	
Total Employment Impact	46,934		1,358,820	
Average Annual Wage	$89,501	5.5%	$90,458	6.2%
Drugs and Pharmaceuticals				
Establishments	184	2.2%	3,301	8.0%
Employment	19,233	-2.5%	293,353	3.2%
Location Quotient	1.02		n/a	
Direct-Effect Employment Multiplier	10.5		11.0	
Total Employment Impact	202,273		3,242,627	
Average Annual Wage	$73,375	-1.7%	$117,524	10.3%
Medical Devices and Equipment				
Establishments	350	0.9%	7,636	5.5%
Employment	12,486	-4.4%	349,045	-0.1%
Location Quotient	0.56		n/a	
Direct-Effect Employment Multiplier	4.2		4.6	
Total Employment Impact	51,877		1,596,802	
Average Annual Wage	$68,307	4.1%	$79,537	5.1%
Research, Testing, and Medical Laboratories				
Establishments	1,078	3.2%	26,702	10.2%
Employment	25,243	-0.4%	483,412	3.4%
Location Quotient	0.81		n/a	
Direct-Effect Employment Multiplier	2.9		3.1	
Total Employment Impact	74,184		1,554,719	
Average Annual Wage	$93,589	21.5%	$97,485	6.8%
Total Bioscience Industry				
Establishments	3,054	3.2%	77,283	5.7%
Employment	75,685	-0.5%	1,655,680	2.2%
Location Quotient	0.71		n/a	
Direct-Effect Employment Multiplier	5.3		5.5	
Total Employment Impact	398,179		9,185,094	
Average Annual Wage	$82,890	9.1%	$94,543	7.2%
Total Private Sector				
Establishments	563,580	2.2%	8,937,672	2.7%
Employment	7,444,860	4.0%	116,018,300	4.4%
Average Annual Wage	$67,301	5.0%	$51,148	4.3%

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

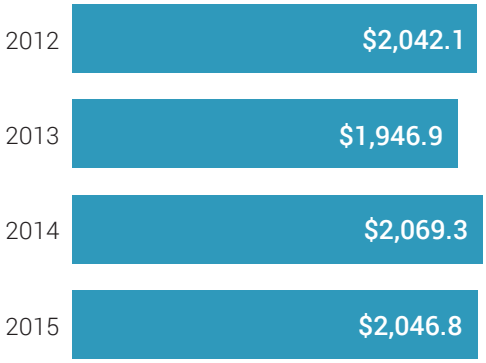
New York

Bioscience Research in New York

Bioscience Academic R&D Expenditures
$ Millions
FY 2014

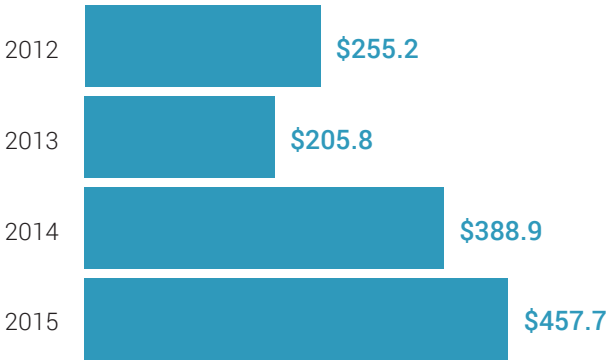


NIH Awards
$ Millions
FY 2012-2015

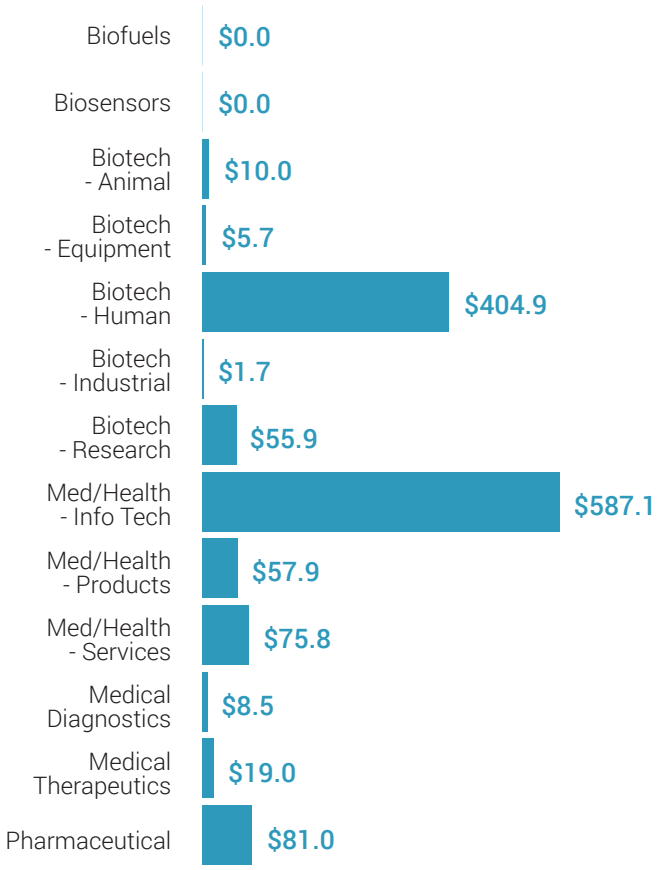


Bioscience Venture Capital in New York

Bioscience-Related Venture Capital Investments
$ Millions
2012-2015

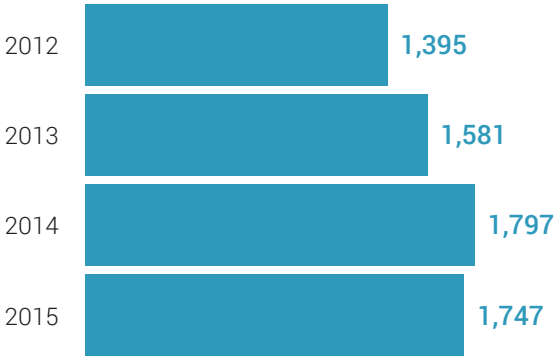


Bioscience-Related Venture Capital Investments by Segment
$ Millions
2012-2015

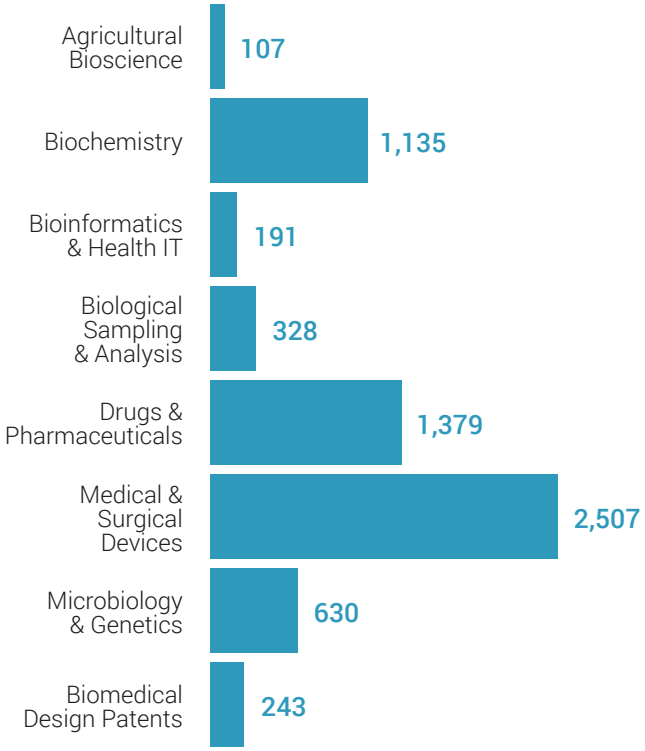


Bioscience Patents in New York

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.

TECONOMY PARTNERS LLC
Innovating Tomorrow's Economic Landscape

Bio Biotechnology Innovation Organization