



New York's large bioscience industry has seen moderate employment growth in recent years, with state firms increasing their employment base by 1.4 percent from 2014 to 2016. In 2016, the industry employed nearly 79,000 in 3,514 business establishments across the state. Job growth was driven by three of the five industry subsectors, with research, testing and medical labs the fastest growing among them. New York is a national leader in the size and breadth of its innovation ecosystem for the biosciences. The state is among the top tier in key measures, all of which have been increasing in recent years, including in academic R&D where its research universities spent nearly \$4.1 billion in bioscience-related fields in 2016; in NIH funding awards, which have risen to nearly \$2.4 billion in FY 2017; in venture capital investments; and in patent activities.

## Bioscience Performance Metrics

### Summary of State Performance in Selected Bioscience-related Metrics

Metric	New York	United States	Quintile
<b>Bioscience Industry, 2016</b>			
Bioscience Industry Employment	78,872	1,743,639	I
Bioscience Industry Location Quotient	0.71	n/a	IV
Bioscience Industry Establishments	3,514	85,702	I
<b>Academic Bioscience R&amp;D Expenditures, FY 2016</b>			
Bioscience R&D (\$ thousands)	\$4,057,179	\$41,972,205	I
Bioscience Share of Total R&D	70%	62%	II
Bioscience R&D Per Capita	\$205	\$130	I
<b>NIH Funding, FY 2017</b>			
Funding (\$ thousands)	\$2,386,045	\$26,150,485	I
Funding Per Capita	\$120	\$80	I
<b>Bioscience Venture Capital Investments, 2014-17 (\$ millions)</b>	\$2,157.75	\$66,168.62	I
<b>Bioscience and Related Patents, 2014-17</b>	6,977	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.

Industry Subsector	New York		United States	
	2016	2014-2016 Change	2016	2014-2016 Change
<b>Agricultural Feedstock and Industrial Biosciences</b>				
Establishments	36	-5.3%	1,709	-3.2%
Employment	778	-30.4%	68,027	-1.2%
Location Quotient	0.18		n/a	
Direct-Effect Employment Multiplier	4.16			
Total Employment Impact	3,237			
Average Annual Wage	\$64,627	6.4%	\$80,961	2.7%
<b>Bioscience-Related Distribution</b>				
Establishments	1,573	0.7%	39,149	3.8%
Employment	19,192	-0.3%	469,640	3.7%
Location Quotient	0.64		n/a	
Direct-Effect Employment Multiplier	2.04			
Total Employment Impact	39,124			
Average Annual Wage	\$93,901	4.4%	\$93,677	2.7%
<b>Drugs and Pharmaceuticals</b>				
Establishments	185	0.5%	3,754	13.7%
Employment	19,504	1.4%	299,113	2.0%
Location Quotient	1.02		n/a	
Direct-Effect Employment Multiplier	5.06			
Total Employment Impact	98,722			
Average Annual Wage	\$80,229	9.3%	\$113,815	-3.2%
<b>Medical Devices and Equipment</b>				
Establishments	363	3.7%	8,083	5.9%
Employment	12,661	1.4%	359,293	2.9%
Location Quotient	0.55		n/a	
Direct-Effect Employment Multiplier	2.46			
Total Employment Impact	31,131			
Average Annual Wage	\$70,054	2.6%	\$84,746	6.5%
<b>Research, Testing and Medical Laboratories</b>				
Establishments	1,356	10.4%	33,007	13.1%
Employment	26,737	4.0%	547,566	8.2%
Location Quotient	0.77		n/a	
Direct-Effect Employment Multiplier	2.15			
Total Employment Impact	57,435			
Average Annual Wage	\$108,652	-5.2%	\$106,942	5.5%
<b>Total Bioscience Industry</b>				
Establishments	3,514	4.5%	85,702	7.7%
Employment	78,872	1.4%	1,743,639	4.4%
Location Quotient	0.71		n/a	
Direct-Effect Employment Multiplier	2.91			
Total Employment Impact	229,649			
Average Annual Wage	\$91,403	1.5%	\$98,961	3.1%
<b>Total Private Sector</b>				
Establishments	568,329	0.8%	9,243,034	3.4%
Employment	7,713,662	3.6%	120,884,570	4.2%
Average Annual Wage	\$69,303	3.0%	\$53,354	4.3%

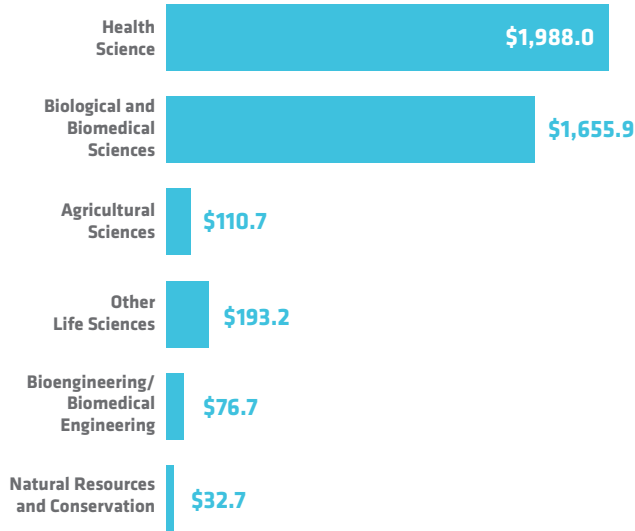
Note: U.S. employment metrics include Puerto Rico.

## Bioscience Research in New York

### Bioscience Academic R&D Expenditures

\$ Millions

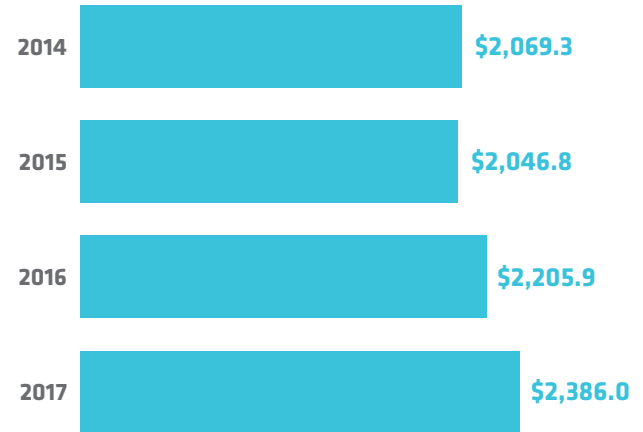
FY 2016



### NIH Awards

\$ Millions

FY 2014-2017

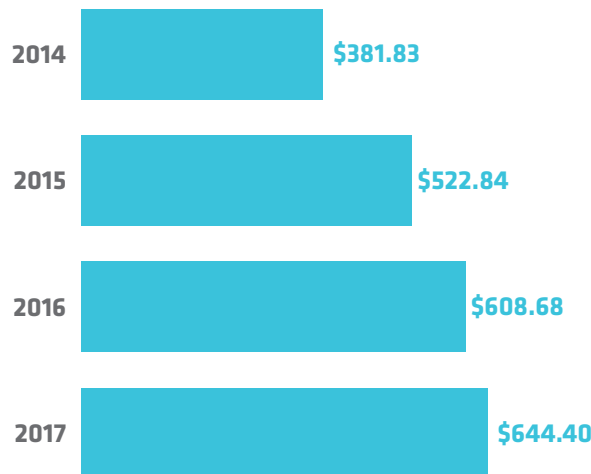


## Bioscience Venture Capital in New York

### Bioscience-Related Venture Capital Investments

\$ Millions

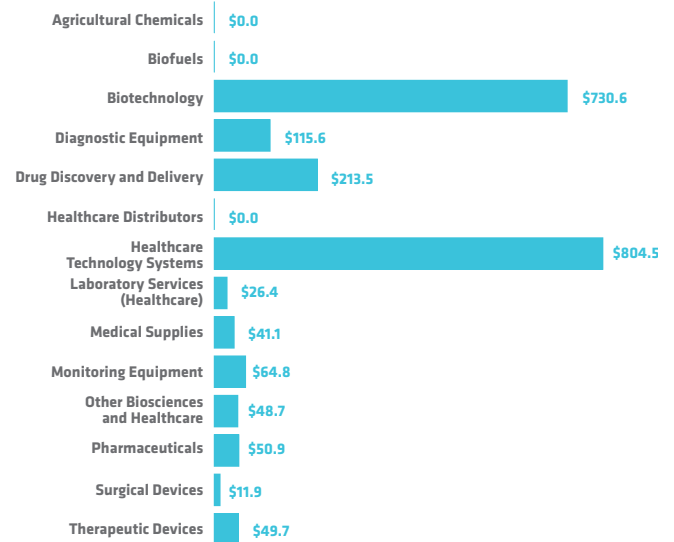
2014-2017



### Bioscience-Related Venture Capital Investments by Segment

\$ Millions

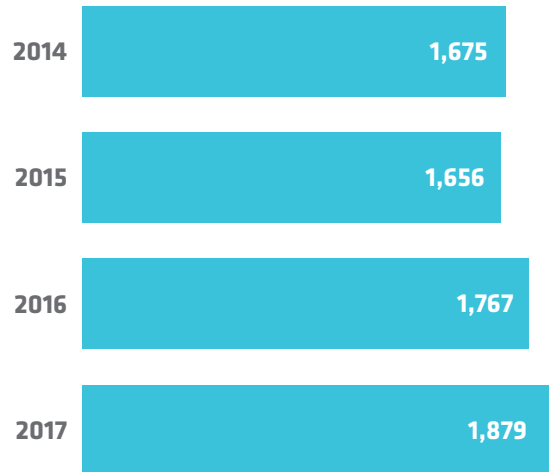
2014-2017



## Bioscience Patents in New York

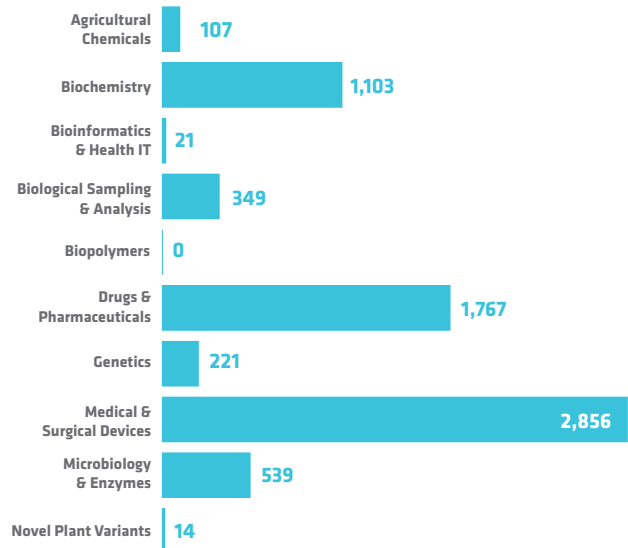
Bioscience-Related U.S. Patents

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.