

NEW YORK

New York accounts for 5 percent or more of national employment in three bioscience subsectors—drugs and pharmaceuticals (also concentrated with a location quotient of 1.11); research, testing, and medical laboratories; and medical devices and equipment. New York ranks among the top 10 states across all additional key bioscience metrics. Academic bioscience research expenditures totaled \$2.53 billion in 2006, led by medical sciences (\$1.4 billion) and biological sciences (\$963 million). During the past 6 years, \$1.2 billion was invested in bioscience venture capital, led by medical diagnostics and human biotechnology. Drugs and pharmaceuticals were the largest category of 5,139 patents issues over the same period, followed by biochemistry and surgical and medical instruments.

Major Industry Developments and Recent Successes

- **Bioenvision** of New York City was acquired by Genzyme in October 2007 in an all-cash transaction valued at \$345 million.
- **Acorda Therapeutics** (NASDAQ: ACOR) raised \$77.5 million in a follow-on offering in June/July 2007.
- **Progenics Pharmaceuticals** (NASDAQ:PGNX) raised \$60.2 million in a follow-on offering in September 2007.

Recent State Initiatives

In 2008, the **Empire State Stem Cell Board** created in 2007 made \$14.5 million in 1-year development awards to 25 research institutions statewide. This is the first wave of awards from \$600 million set aside for the Stem Cell Trust over 10 years. The Board provides grants for basic, applied, translational, and other research and is guided by separate funding and ethics committees.

In New York City, construction began in 2007 on the 800,000-square-foot Phase I of the **East River Science Park**, developed by Alexandria Real Estate. The International AIDS Vaccine Initiative also committed to lease space at the city-owned Brooklyn Army Terminal, where Phase 3 Properties, under the **BioBAT** initiative, was designated developer for additional commercial lab space.

In Buffalo, major new facilities for the State-supported **Center of Excellence in Bioinformatics and Life Sciences** were opened in 2007 at the consortial Buffalo Niagara Medical Campus, which also acquired a nearby factory building for rehabilitation as commercial space. In Rochester, the University of Rochester Medical Center added 40,000 square feet of wet-lab business incubator capacity at the **Rochester BioVenture Center**. On Long Island, **Broad Hollow Bioscience Park** at Farmingdale completed construction in 2008 on a second wet-lab incubator.

For additional information on New York's bioscience policies and programs, please see <http://www.empire.state.ny.us/>, <http://www.nystar.state.ny.us>, and <http://www.nyba.org>.

Bioscience Industry Base, 2006

Industry Subsector	New York		United States	
	2006	2001-06 Change	2006	2001-06 Change
Agricultural Feedstock & Chemicals				
Establishments	55	-8.3%	2,183	3.8%
Employment	1,548	-17.9%	105,846	-6.1%
Location Quotient	0.24		n.a.	
Direct-Effect Employment Multiplier	3.86		11.22	
Total Employment Impact	5,980		1,214,709	
Average Annual Wage	\$53,872		\$67,870	
Drugs & Pharmaceuticals				
Establishments	153	-0.6%	2,654	1.9%
Employment	21,712	5.2%	317,149	4.0%
Location Quotient	1.11		n.a.	
Direct-Effect Employment Multiplier	4.62		9.92	
Total Employment Impact	100,331		2,880,242	
Average Annual Wage	\$69,885		\$86,892	
Medical Devices & Equipment				
Establishments	896	4.4%	15,215	0.3%
Employment	21,654	0.5%	422,993	-0.9%
Location Quotient	0.83		n.a.	
Direct-Effect Employment Multiplier	2.54		4.85	
Total Employment Impact	54,987		1,980,128	
Average Annual Wage	\$59,504		\$59,441	
Research, Testing, & Medical Laboratories				
Establishments	1,260	13.8%	22,857	32.7%
Employment	27,672	0.0%	449,991	17.8%
Location Quotient	1.00		n.a.	
Direct-Effect Employment Multiplier	1.93		3.25	
Total Employment Impact	53,276		1,440,500	
Average Annual Wage	\$61,481		\$71,284	
Total Private Sector				
Establishments	558,097	5.3%	8,575,730	10.2%
Employment	7,006,131	-0.3%	113,463,842	3.1%
Average Annual Wage	\$56,895		\$42,272	

Note: n.a. = metric is not applicable.

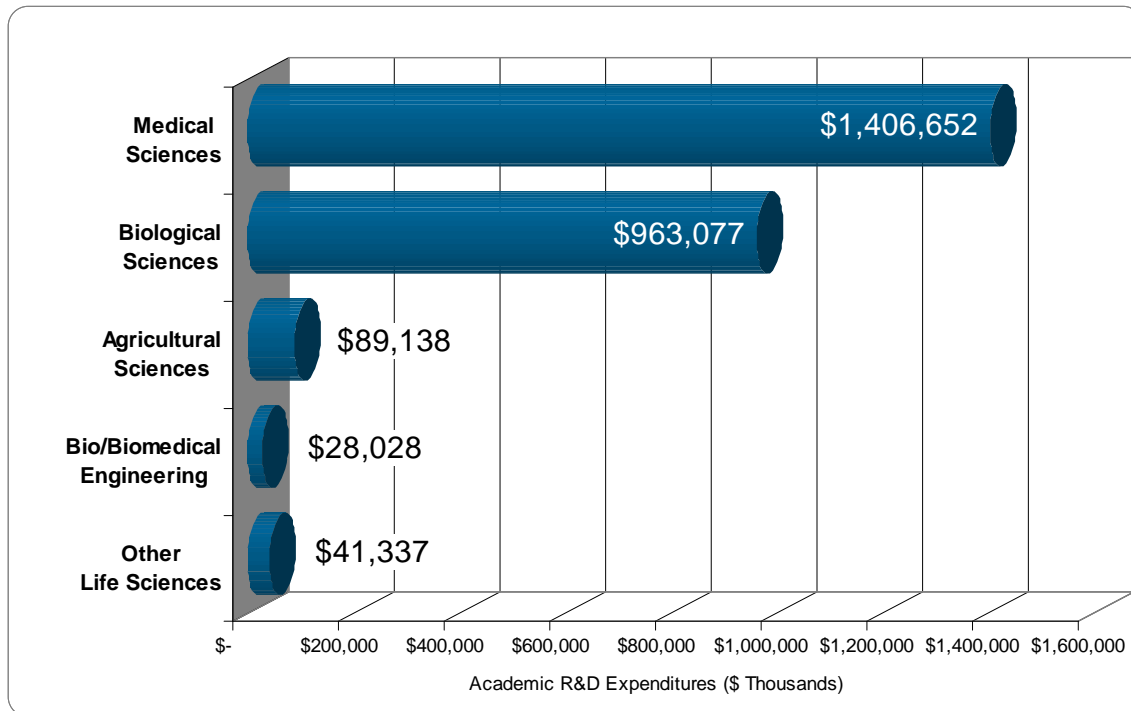
Additional Bioscience Performance Metrics

Summary of State Performance in Selected Bioscience-related Metrics

	New York	United States	Rank
Academic R&D Expenditures, FY 2006			
Total (\$ thousands)	\$3,789,658	\$47,760,402	2
Bioscience R&D (\$ thousands)	\$2,528,232	\$29,307,628	2
Bioscience Share of Total R&D	66.7%	61.4%	
Bioscience R&D Per Capita	\$131.12	\$98.10	
Change in Bioscience R&D FY 2002–2006	33.1%	36.9%	
NIH Funding, FY 2007			
Total (\$ thousands)	\$1,934,768	\$21,066,389	3
Per Capita Funding	\$100.26	\$69.84	
Change in Funding, FY 2002–2007	12.3%	11.2%	
Higher Education Degrees in Bioscience Fields, AY 2006	8,510	143,433	4
Employment in Bioscience-related Occupations, 2006	34,520	588,520	3
Bioscience Venture Capital Investments, 2002-2007 (\$ millions)	\$1,224.5	\$51,260.9	10
Bioscience and Related Patents, 2002-2007	5,139	121,817	5

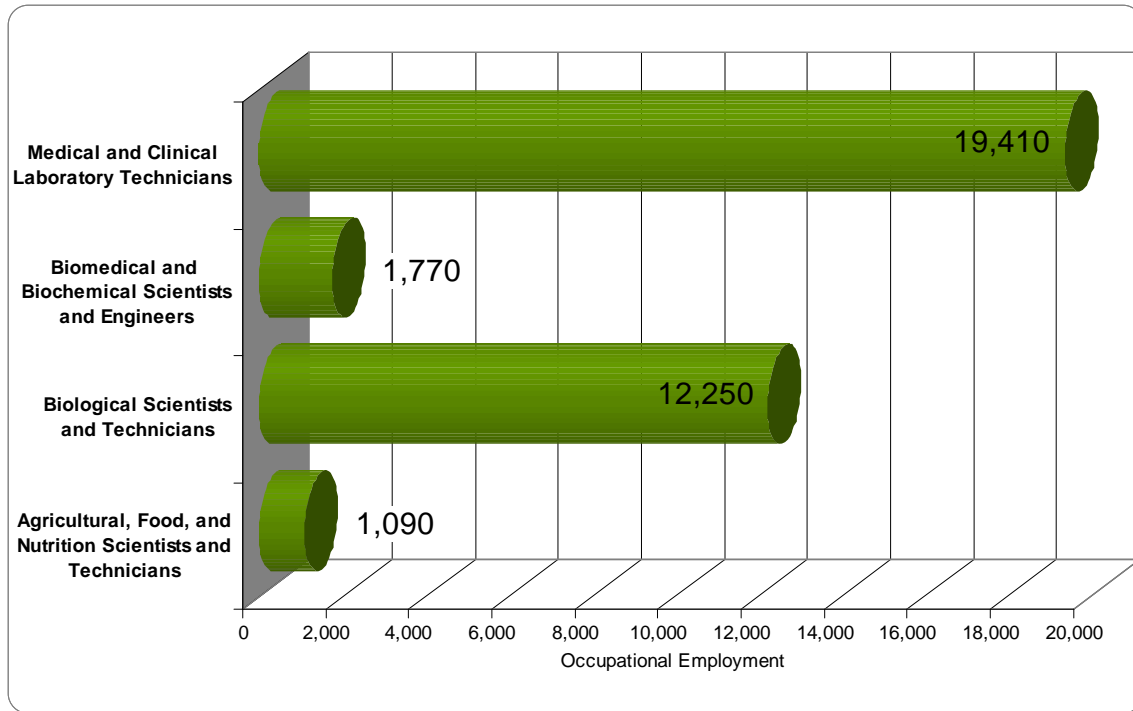
Bioscience R&D Base

Bioscience Academic R&D Expenditures in New York, FY 2006

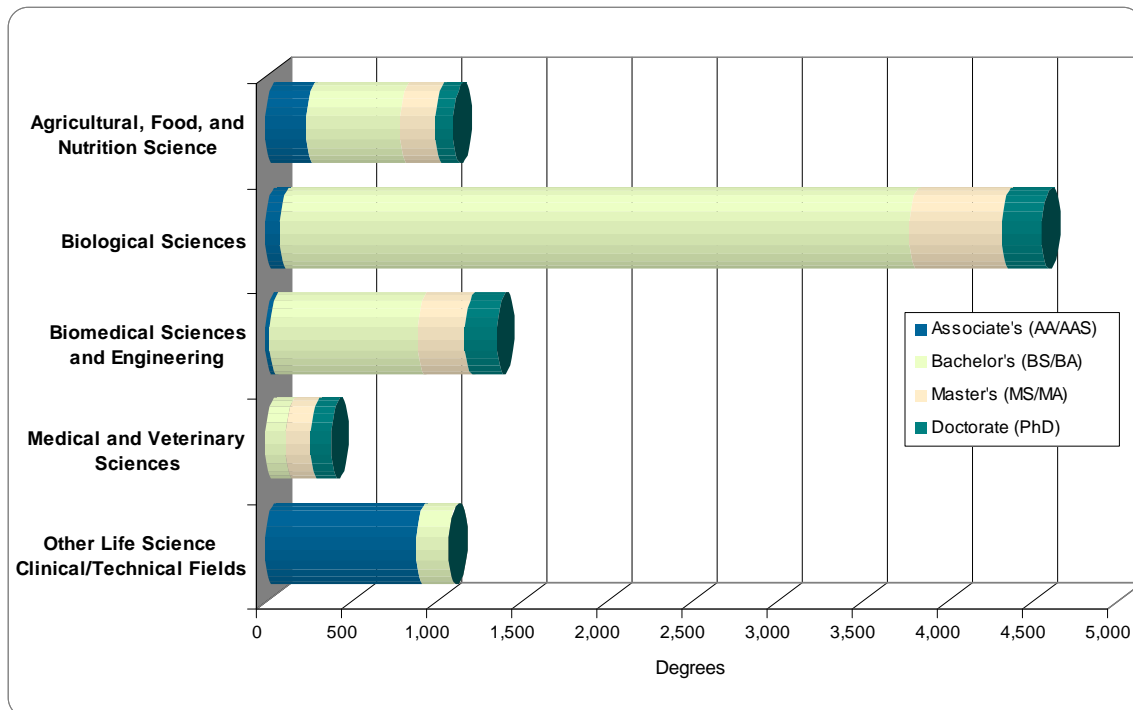


Bioscience Talent Base

Bioscience-related Occupational Employment in New York, 2006

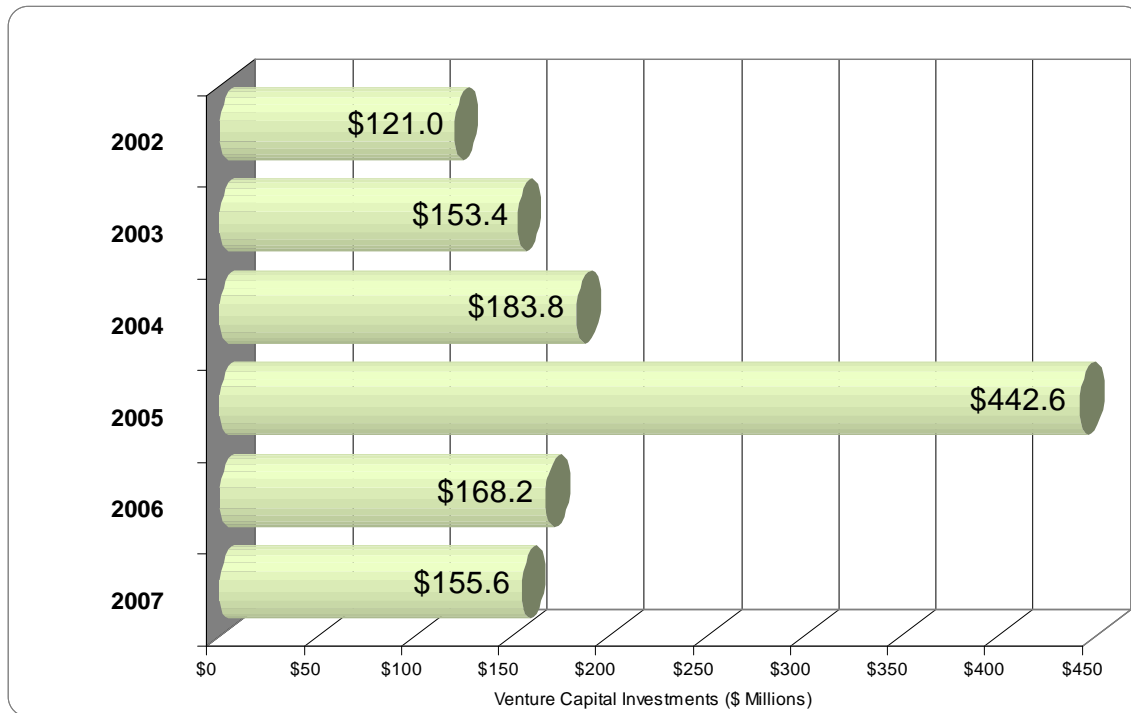


Bioscience-related Degrees in New York, AY 2006

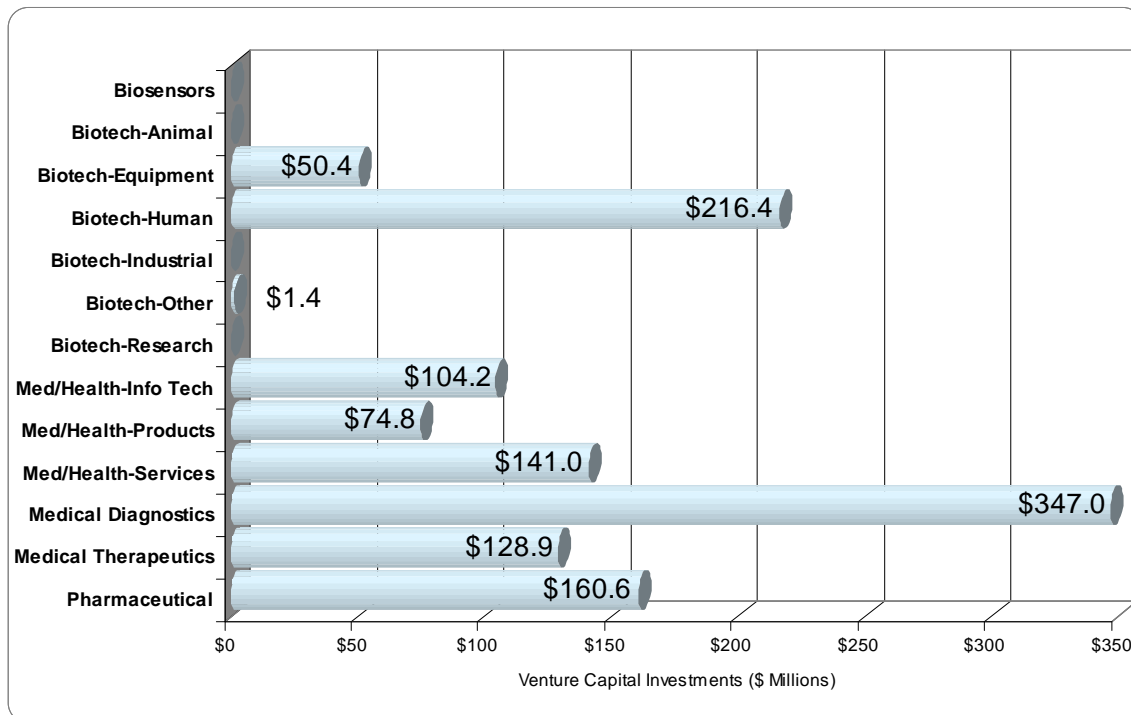


Bioscience Venture Capital

Bioscience-related Venture Capital Investments in New York, 2002–2007

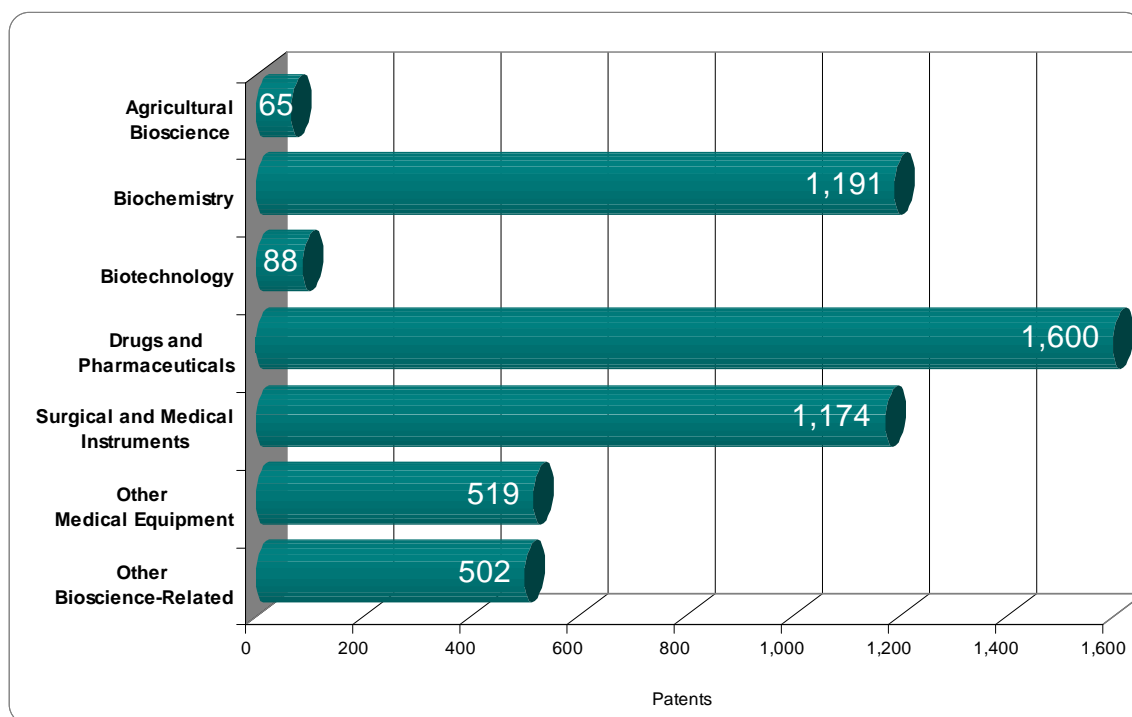


Bioscience-related Venture Capital Investments in New York by Segment, 2002–2007



Bioscience Patents

Bioscience-related Patents by Classification Group in New York, 2002–2007



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Source Notes:

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW) industry data provided by the Minnesota IMPLAN Group, 2001 and 2006.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2005 (most currently available).

Academic R&D Expenditures: National Science Foundation (NSF) Survey of Research and Development Expenditures at Universities and Colleges, 2002 and 2006.

NIH Funding: National Institutes of Health – Office of Extramural Research, Award Trends – Dollars Awarded by State, 2002 and 2007.

Higher Education Degrees: National Center for Educational Statistics, Integrated Postsecondary Education Data System (IPEDS), 2006.

Occupational Employment: U.S. Bureau of Labor Statistics, Occupational Employment Statistics (OES) survey data, 2006.

Venture Capital: Thomson Reuters VentureXpert Database, 2002-2007, as of May 1, 2008.

Patents: U.S. Patent & Trademark Office data as available from the Thomson Reuters' Delphion Patent Analysis Database, 2002–2007, as of May 1, 2008.

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