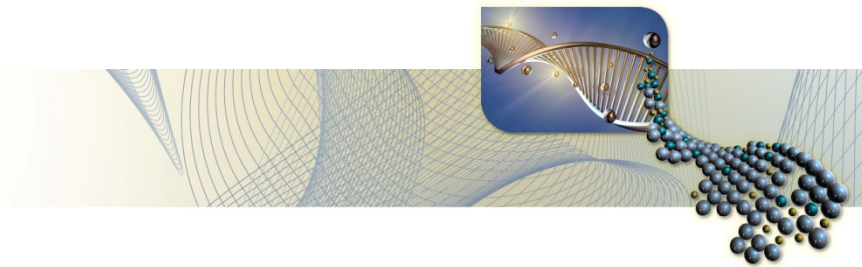


MARYLAND



Maryland is home to a specialized and rapidly growing bioscience industry. The State's largest bioscience subsector, research, testing and medical laboratories is also its' most specialized in employment concentration (location quotient of 2.23). The three major subsectors in Maryland—research, testing, and medical labs, drugs and pharmaceuticals, and medical devices and equipment—have each outpaced their corresponding national subsectors in overall job growth since 2001. Academic bioscience research and development expenditures reached \$1.36 billion in 2008 and were primarily in medical sciences (\$915 million). For its size, Maryland has high concentrations of research dollars—the State is a national leader in per capita bioscience academic R&D and NIH funding. Maryland's biomedical research infrastructure hosted 717 active clinical trials in 2009. In the last six years, the State had \$1.7 billion in venture capital investments, primarily in the human biotechnology and pharmaceutical sectors. Biochemistry was the largest single patent category followed by drugs and pharmaceuticals.

●●● Bioscience Performance Metrics

Summary of State Performance in Selected Bioscience-related Metrics

Metrics	Maryland	United States	Rank*
Bioscience Industry, 2008			
Total Bioscience Industry Employment, 2008	32,383	1,420,324	II
Bioscience Industry Location Quotient, 2008	1.26	n/a	II
Biosciences Industry Establishments, 2008	1,271	47,593	I
Academic R&D Expenditures, FY 2008			
Bioscience R&D (\$ thousands)	\$1,359,357	\$31,818,810	6
Bioscience Share of Total R&D	49.5%	61.3%	41
Bioscience R&D Per Capita	\$240.23	\$104.54	2
Change in Bioscience R&D, FY 2004–08	18.0%	22.3%	29
NIH Funding, FY 2009			
Total, Including ARRA Funds (\$ thousands)	\$1,181,164	\$25,837,590	6
Per Capita Funding	\$207.24	\$84.16	3
Change in Baseline Funding, FY 2004–09**	-28.5%	-4.7%	50
Change in Total Funding, FY 2004–09	-16.3%	14.6%	51
Clinical Trials, Initiated 2009	717	5,299	8
Higher Education Degrees in Bioscience Fields, AY 2008	3,036	161,811	17
Employment in Bioscience-related Occupations, 2008	20,210	717,510	11
Bioscience Venture Capital Investments, 2004–09 (\$ millions)	\$1,727.5	\$60,099	9
Bioscience and Related Patents, 2004–09	3,554	75,593	7

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile). All other metrics are ranked 1-52.

**Baseline Funding does not include American Recovery and Reinvestment Act (ARRA) funds for 2009.

For source notes, see end of State Profile.

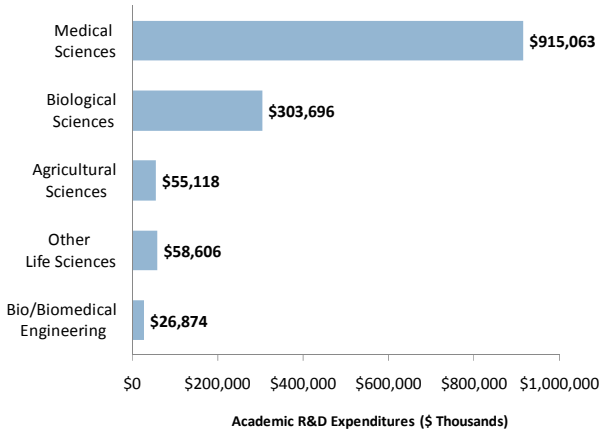
●●● Bioscience Industry Base, 2008

INDUSTRY SUBSECTOR	Maryland		United States	
	2008	2001-08 Change	2008	2001-08 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS				
Establishments	22	4.0%	2,440	16.0%
Employment	351	-39.7%	114,793	1.9%
Location Quotient	0.17		n/a	
Direct-Effect Employment Multiplier	4.49		11.33	
Total Employment Impact	1,575		1,284,650	
Average Annual Wage	\$77,759		\$72,279	
DRUGS & PHARMACEUTICALS				
Establishments	69	1.5%	2,771	6.4%
Employment	6,097	27.0%	311,882	2.3%
Location Quotient	1.08		n/a	
Direct-Effect Employment Multiplier	5.74		9.92	
Total Employment Impact	35,017		2,873,278	
Average Annual Wage	\$97,146		\$93,378	
MEDICAL DEVICES & EQUIPMENT				
Establishments	230	-8.9%	15,227	0.4%
Employment	3,314	10.5%	435,509	2.0%
Location Quotient	0.42		n/a	
Direct-Effect Employment Multiplier	3.10		4.87	
Total Employment Impact	10,285		2,029,581	
Average Annual Wage	\$62,493		\$63,606	
RESEARCH, TESTING, & MEDICAL LABORATORIES				
Establishments	950	74.9%	27,154	57.7%
Employment	22,621	63.4%	558,140	46.1%
Location Quotient	2.23		n/a	
Direct-Effect Employment Multiplier	2.43		3.30	
Total Employment Impact	54,982		1,853,127	
Average Annual Wage	\$83,822		\$80,785	
TOTAL BIOSCIENCES INDUSTRY				
Establishments	1,271	43.6%	47,593	28.3%
Employment	32,383	45.7%	1,420,324	15.8%
Location Quotient	1.26		n/a	
Direct-Effect Employment Multiplier	3.15		5.82	
Total Employment Impact	101,860		8,040,636	
Average Annual Wage	\$84,082		\$77,595	
TOTAL PRIVATE SECTOR				
Establishments	162,513	12.0%	8,860,956	13.8%
Employment	2,066,762	4.4%	113,917,377	3.5%
Average Annual Wage	\$47,570		\$45,229	

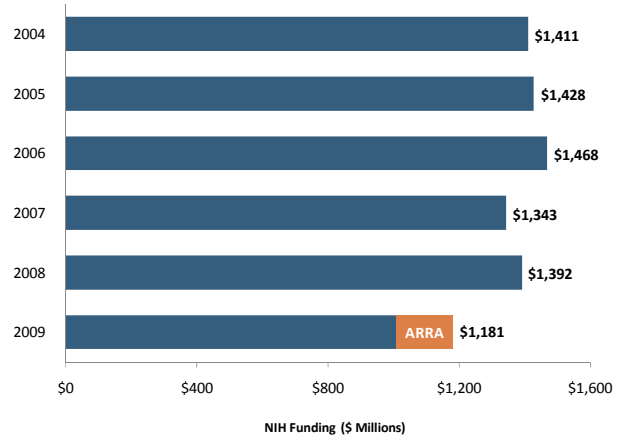
Note: U.S. employment metrics include Puerto Rico. Estimates of total employment impacts do not include Puerto Rico.

Bioscience Performance Metrics

Bioscience Academic R&D Expenditures in Maryland, FY 2008

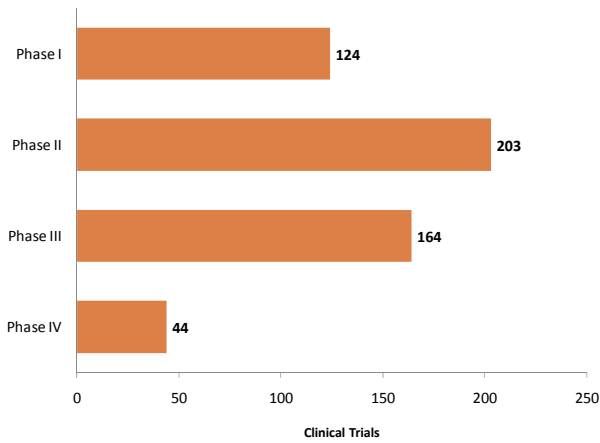


NIH Awards in Maryland, 2004–2009

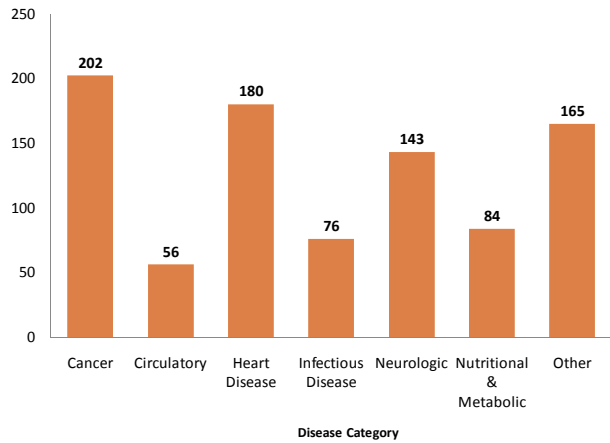


Recent Clinical Trial Activities

Clinical Trials by Phase in Maryland, 2009

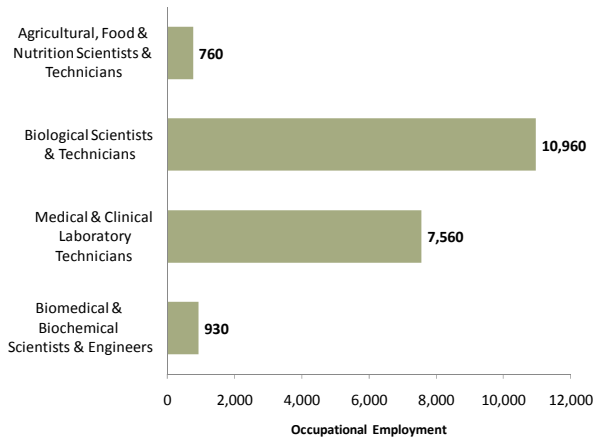


Clinical Trials by Major Disease Category in Maryland, 2009

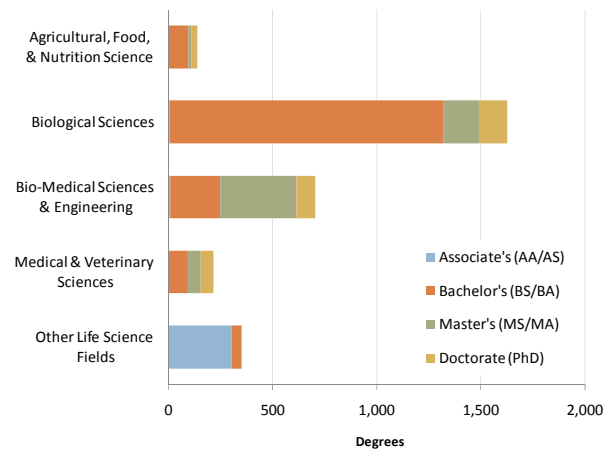


Bioscience Talent Base

Bioscience-related Occupational Employment in Maryland, 2008

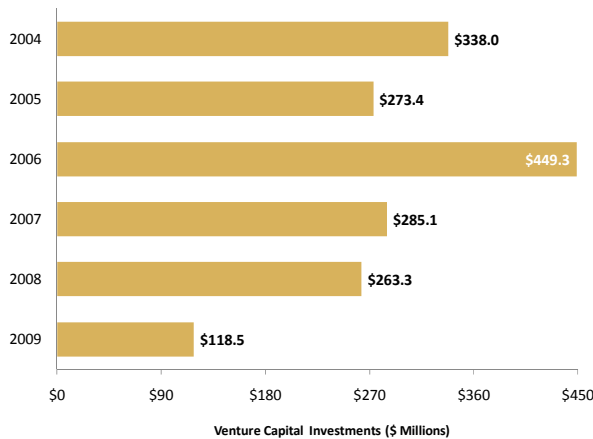


Bioscience-related Degrees in Maryland, AY 2008

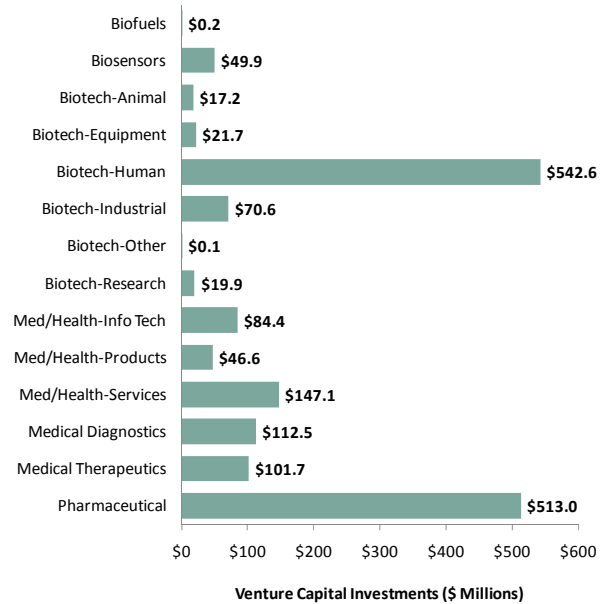


Bioscience Venture Capital

Bioscience-related Venture Capital Investments in Maryland, 2004–2009

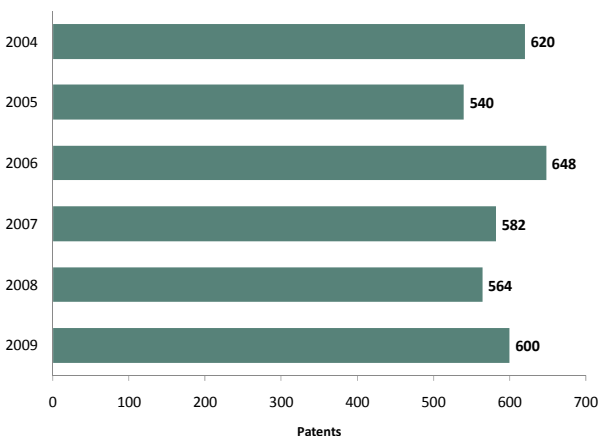


Bioscience-related Venture Capital Investments in Maryland by Segment, 2004–2009

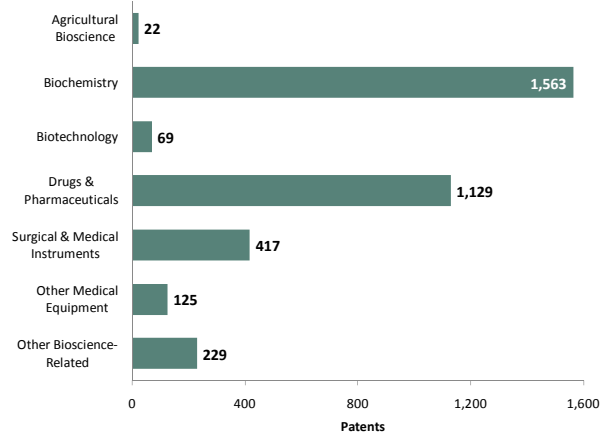


●●● Bioscience Patents

Bioscience-related Patents in Maryland, 2004–2009



Bioscience-related Patents by Classification Group in Maryland, 2004–2009



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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 2008.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2006 (most currently available).

Academic R&D Expenditures: National Science Foundation (NSF) Survey of Research and Development Expenditures at Universities and Colleges, 2004 and 2008.

NIH Funding: National Institutes of Health, Office of Extramural Research, Award Trends, Dollars Awarded by State, 2004 and 2009.

Clinical Trials: National Institutes of Health, Clinicaltrials.gov, trials that were initiated in 2009.

Higher Education Degrees: National Center for Educational Statistics, Integrated Postsecondary Education Data System (IPEDS), 2008.

Occupational Employment: U.S. Bureau of Labor Statistics, Occupational Employment Statistics (OES) survey data, 2008.

Venture Capital: Thomson Reuters' VentureXpert Database, 2004–2009, as of January 15, 2010.

Patents: U.S. Patent & Trademark Office data as available from the Thomson Reuters' Delphion Patent Analysis Database, 2004–2009, as of January 15, 2010.

For a more detailed discussion of the data and methodology used, please see the Appendix to the full national report. ©2010