Maryland

Maryland's sizable and highly concentrated bioscience industry has grown by nearly 1 percent since 2007, a period which includes the deep national recession and early recovery years. State bioscience companies employed nearly 34,000 in 2012 across 1,963 business establishments. Maryland has a specialized employment concentration in two bioscience subsectors—research, testing, and medical labs and drugs and pharmaceuticals. Both of these specialized sectors have grown since 2007, with drugs and pharmaceuticals standing out with nearly 14 percent job growth while that subsector contracted nationally. Maryland is among the top tier of states in the size and concentration of its bioscience and biomedical research complex. The state's research universities conducted nearly $1.6 billion in bioscience academic R&D in 2012. Likewise, Maryland institutions have received nearly $1.6 billion in funding from NIH in 2013. State bioscience companies have received $1.3 billion in venture capital since 2009, again among the top tier of states, with the majority invested in human biotechnologies.

Bioscience Performance Metrics

Summary of State Performance in Selected Bioscience-related Metrics

Metric	Maryland	United States	Quintile
Bioscience Industry, 2012			
Bioscience Industry Employment	33,981	1,619,746	II
Bioscience Industry Location Quotient	1.15	n/a	II
Bioscience Industry Establishments	1,963	73,088	II
Academic Bioscience R&D Expenditures, FY 2012			
Bioscience R&D ($ thousands)	$1,557,066	$38,139,876	I
Bioscience Share of Total R&D	47%	61%	IV
Bioscience R&D Per Capita	$263	$119	I
NIH Funding, FY 2013			
Funding ($ thousands)	$1,590,089	$22,293,255	I
Funding Per Capita	$268	$70	I
Bioscience Venture Capital Investments, 2009–13 ($ millions)	$1,322.5	$49,401.7	I
Bioscience and Related Patents, 2009–13	3,661	100,238	II

State ranking figures for bioscience performance metrics are calculated as quintiles, where I = top quintile, III = middle quintile, and V = bottom quintile.

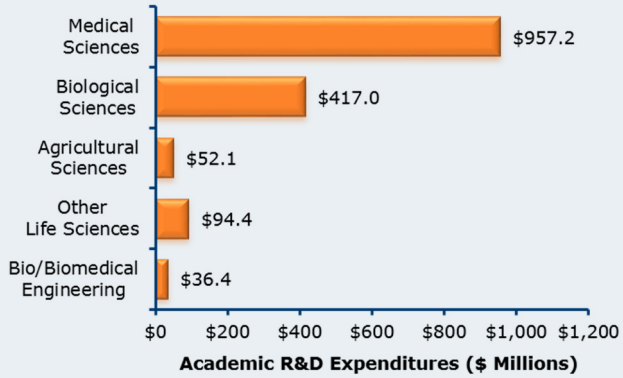
For source notes, see end of State Profile.

Industry Subsector	Maryland		United States	
	2012	2007–2012 Change	2012	2007–2012 Change
Agricultural Feedstock & Chemicals				
Establishments	13	-7.1%	1,772	5.2%
Employment	214	-24.3%	76,404	-1.0%
Location Quotient	0.15		n/a	
Direct-Effect Employment Multiplier	15.0		18.1	
Total Employment Impact	3,211		1,382,637	
Average Annual Wage	$57,918	-18.8%	$75,828	14.2%
Bioscience-Related Distribution				
Establishments	753	6.6%	36,793	1.4%
Employment	6,404	-0.7%	442,016	-3.9%
Location Quotient	0.77		n/a	
Direct-Effect Employment Multiplier	2.6		2.7	
Total Employment Impact	16,691		1,199,015	
Average Annual Wage	$88,704	16.2%	$85,188	11.5%
Drugs and Pharmaceuticals				
Establishments	70	1.4%	3,057	12.0%
Employment	7,064	13.6%	284,331	-10.9%
Location Quotient	1.36		n/a	
Direct-Effect Employment Multiplier	7.5		9.9	
Total Employment Impact	53,006		2,673,265	
Average Annual Wage	$109,588	-3.2%	$106,576	13.9%
Medical Devices and Equipment				
Establishments	99	12.5%	7,235	12.0%
Employment	1,881	-27.8%	349,432	1.4%
Location Quotient	0.30		n/a	
Direct-Effect Employment Multiplier	3.4		3.9	
Total Employment Impact	6,433		1,318,459	
Average Annual Wage	$69,006	5.6%	$75,695	10.7%
Research, Testing, and Medical Laboratories				
Establishments	1,028	36.7%	24,231	31.0%
Employment	18,418	1.7%	467,563	9.7%
Location Quotient	2.16		n/a	
Direct-Effect Employment Multiplier	2.8		2.7	
Total Employment Impact	50,923		1,284,196	
Average Annual Wage	$95,863	16.7%	$91,248	15.9%
Total Bioscience Industry				
Establishments	1,963	20.5%	73,088	11.4%
Employment	33,981	0.9%	1,619,746	-0.4%
Location Quotient	1.15		n/a	
Direct-Effect Employment Multiplier	4.2		4.9	
Total Employment Impact	141,481		7,857,572	
Average Annual Wage	$95,642	12.0%	$88,202	12.8%
Total Private Sector				
Establishments	163,969	0.6%	8,699,564	-0.5%
Employment	2,024,367	-2.9%	111,137,206	-3.1%
Average Annual Wage	$51,923	11.8%	$49,130	11.1%

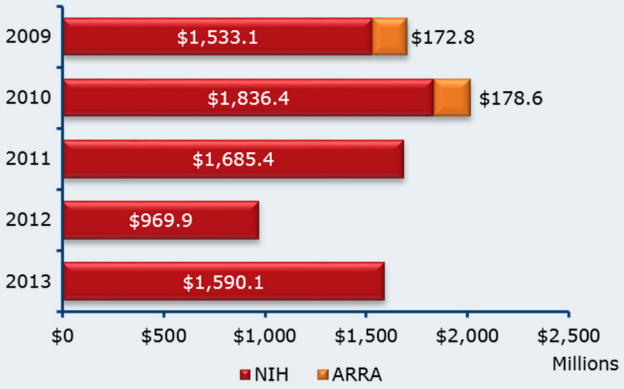
Note: U.S. employment metrics include Puerto Rico. Estimates of total impacts do not include Puerto Rico.

Bioscience Research in Maryland

Bioscience Academic R&D Expenditures, FY 2012



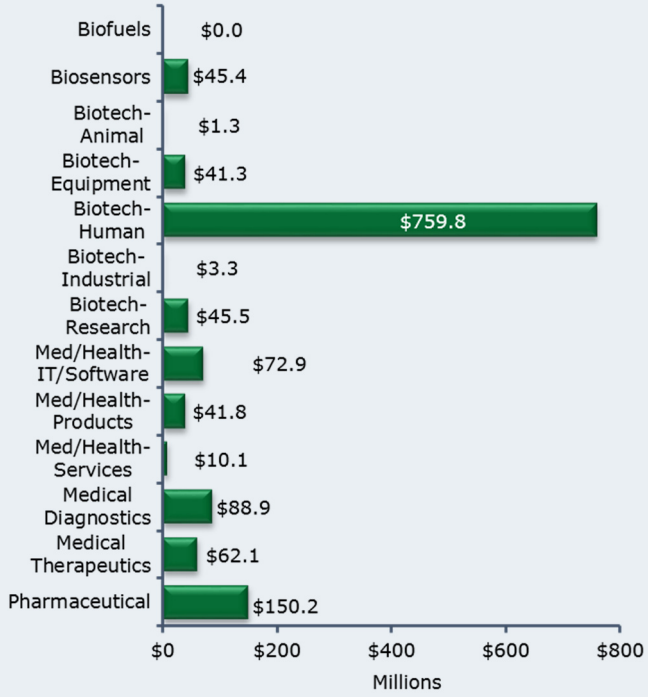
NIH Awards, 2009–2013



Bioscience Venture Capital in Maryland

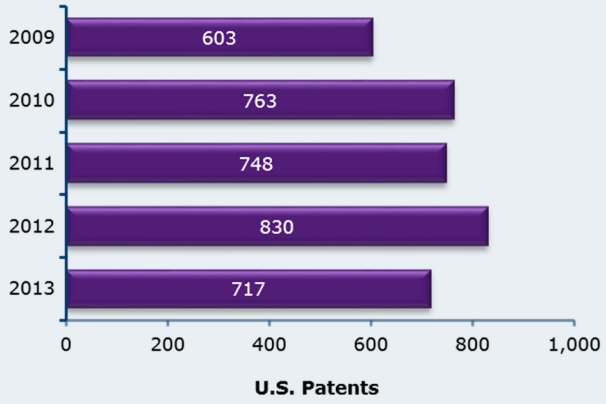
Bioscience-Related Venture Capital Investments, 2009–2013

Bioscience-Related Venture Capital Investments by Segment, 2009–2013

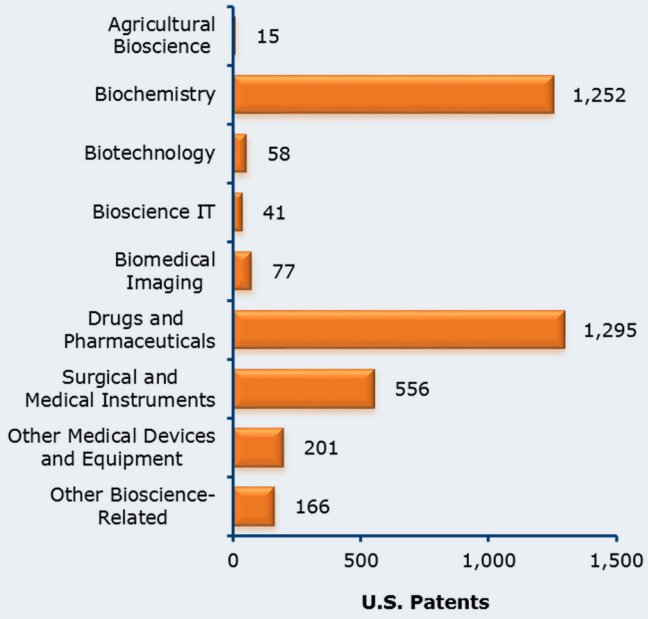


Bioscience Patents in Maryland

Bioscience-Related Patents, 2009–2013



Bioscience-Related Patents by Segment, 2009–2013



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), and NIH-managed funding for FY 2009 and FY 2010 from the American Recovery and Reinvestment Act (ARRA) website.

Venture Capital: Thomson Reuters Thomson ONE venture capital database.

Patents: U.S. Patent & Trademark Office data from Thomson Reuters Delphion Patent Analysis Database.

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