

## Washington



Washington’s bioscience industry employed just over 30,000 in 2012 while operating 1,339 business establishments across the state. The sizable state industry has grown jobs by 2 percent since 2007, a period which includes the deep national recession and early years of the recovery. Job growth in the state’s large and specialized research, testing, and medical labs subsector helped drive this overall bioscience employment increase. Washington is among the top tier of states in NIH funding awarded in 2013 with \$835 million, which translates into a well above-average concentration across the state on a per capita basis. The state’s bioscience companies have received \$1.7 billion in venture capital investments since 2009, also among the leading states in this key measure of access to risk capital.

### Bioscience Performance Metrics

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

Metric	Washington	United States	Quintile
<b>Bioscience Industry, 2012</b>			
Bioscience Industry Employment	30,019	1,619,746	II
Bioscience Industry Location Quotient	0.87	n/a	III
Bioscience Industry Establishments	1,339	73,088	II
<b>Academic Bioscience R&amp;D Expenditures, FY 2012</b>			
Bioscience R&D (\$ thousands)	\$889,148	\$38,139,876	II
Bioscience Share of Total R&D	65%	61%	II
Bioscience R&D Per Capita	\$128	\$119	II
<b>NIH Funding, FY 2013</b>			
Funding (\$ thousands)	\$835,212	\$22,293,255	I
Funding Per Capita	\$120	\$70	I
<b>Bioscience Venture Capital Investments, 2009–13 (\$ millions)</b>	\$1,703.8	\$49,401.7	I
<b>Bioscience and Related Patents, 2009–13</b>	3,313	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.

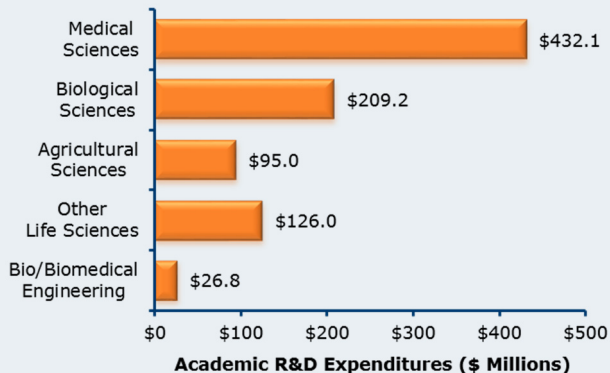
For source notes, see end of State Profile.

Industry Subsector	Washington		United States	
	2012	2007-2012 Change	2012	2007-2012 Change
<b>Agricultural Feedstock &amp; Chemicals</b>				
Establishments	36	20.0%	1,772	5.2%
Employment	738	39.2%	76,404	-1.0%
Location Quotient	0.45		n/a	
Direct-Effect Employment Multiplier	15.0		18.1	
Total Employment Impact	11,037		1,382,637	
Average Annual Wage	\$52,621	1.7%	\$75,828	14.2%
<b>Bioscience-Related Distribution</b>				
Establishments	661	-7.7%	36,793	1.4%
Employment	8,106	-13.1%	442,016	-3.9%
Location Quotient	0.89		n/a	
Direct-Effect Employment Multiplier	2.6		2.7	
Total Employment Impact	21,170		1,199,015	
Average Annual Wage	\$79,741	8.9%	\$85,188	11.5%
<b>Drugs and Pharmaceuticals</b>				
Establishments	52	0.0%	3,057	12.0%
Employment	2,581	1.3%	284,331	-10.9%
Location Quotient	0.42		n/a	
Direct-Effect Employment Multiplier	7.9		9.9	
Total Employment Impact	20,268		2,673,265	
Average Annual Wage	\$51,379	-31.7%	\$106,576	13.9%
<b>Medical Devices and Equipment</b>				
Establishments	130	-7.8%	7,235	12.0%
Employment	5,815	-1.4%	349,432	1.4%
Location Quotient	0.78		n/a	
Direct-Effect Employment Multiplier	4.1		3.9	
Total Employment Impact	23,784		1,318,459	
Average Annual Wage	\$87,744	18.5%	\$75,695	10.7%
<b>Research, Testing, and Medical Laboratories</b>				
Establishments	460	12.7%	24,231	31.0%
Employment	12,780	14.8%	467,563	9.7%
Location Quotient	1.28		n/a	
Direct-Effect Employment Multiplier	2.6		2.7	
Total Employment Impact	33,823		1,284,196	
Average Annual Wage	\$84,228	9.2%	\$91,248	15.9%
<b>Total Bioscience Industry</b>				
Establishments	1,339	-0.6%	73,088	11.4%
Employment	30,019	2.0%	1,619,746	-0.4%
Location Quotient	0.87		n/a	
Direct-Effect Employment Multiplier	4.0		4.9	
Total Employment Impact	118,754		7,857,572	
Average Annual Wage	\$80,096	7.3%	\$88,202	12.8%
<b>Total Private Sector</b>				
Establishments	231,341	8.6%	8,699,564	-0.5%
Employment	2,378,426	-1.6%	111,137,206	-3.1%
Average Annual Wage	\$51,769	16.0%	\$49,130	11.1%

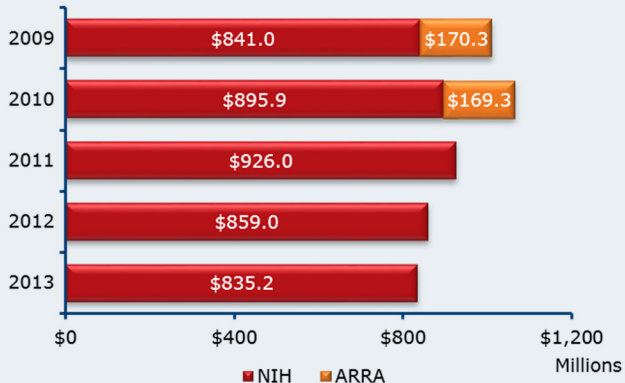
Note: U.S. employment metrics include Puerto Rico. Estimates of total impacts do not include Puerto Rico.

## Bioscience Research in Washington

### Bioscience Academic R&D Expenditures, FY 2012



### NIH Awards, 2009–2013

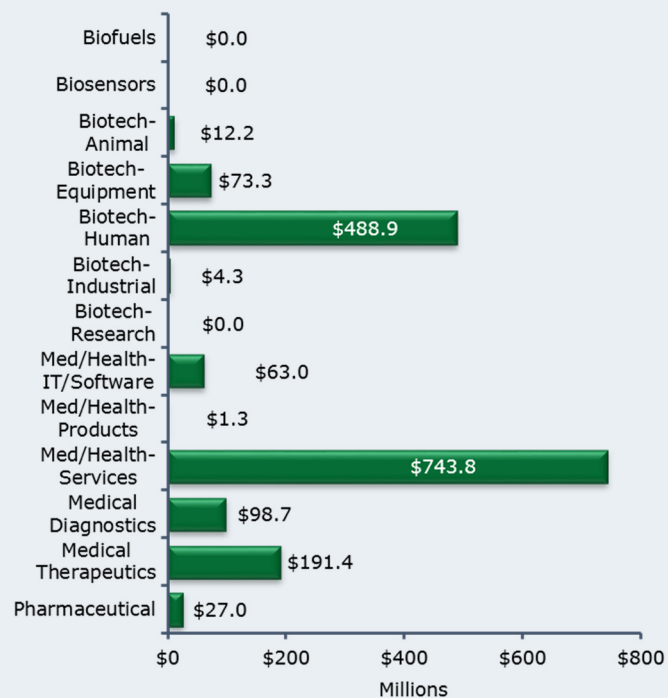


## Bioscience Venture Capital in Washington

### Bioscience-Related Venture Capital Investments, 2009–2013

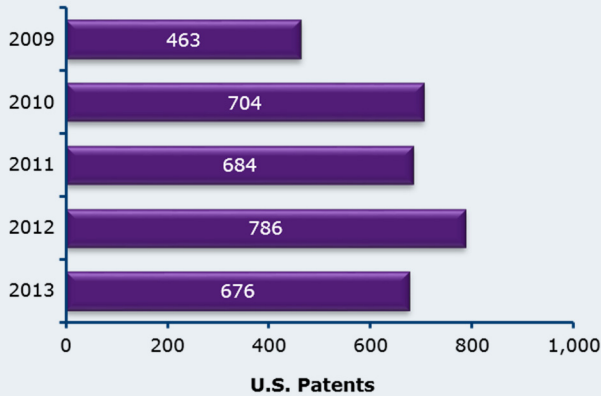


### Bioscience-Related Venture Capital Investments by Segment, 2009–2013

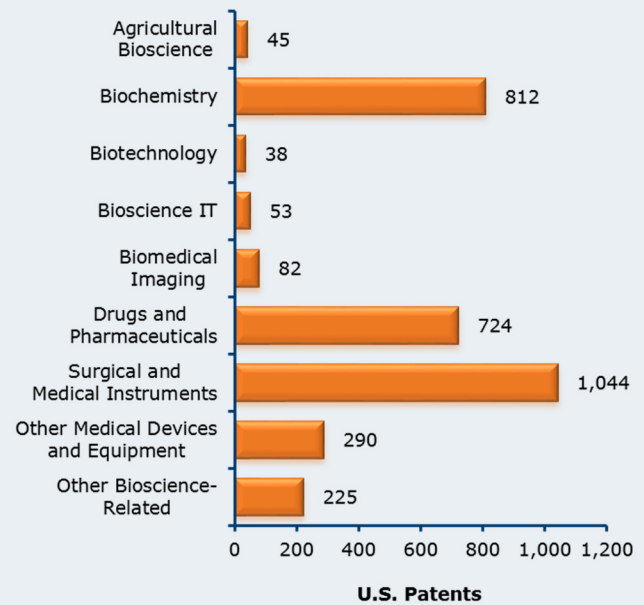


## Bioscience Patents in Washington

**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.