OREGON

Investment, Innovation and Job Creation in a Growing U.S. Bioscience Industry 2018

Oregon's bioscience companies are growing the industry, increasing employment by 3.3 percent from 2014 through 2016 to reach 13,400 state jobs that span 938 business establishments. Four of the industry's five major subsectors contributed to the overall employment increase. The state's research universities conducted $493 million in bioscience-related R&D in 2016. Oregon has a particularly strong focus in biosciences research across its universities, accounting for 70 percent of all academic R&D. Funding for university research has been bolstered by an increase in NIH awards from 2016 to 2017 when state institutions were awarded $312 million.

Bioscience Performance Metrics

Summary of State Performance in Selected Bioscience-related Metrics

Metric	Oregon	United States	Quintile
Bioscience Industry, 2016			
Bioscience Industry Employment	13,400	1,743,639	III
Bioscience Industry Location Quotient	0.60	n/a	IV
Bioscience Industry Establishments	938	85,702	III
Academic Bioscience R&D Expenditures, FY 2016			
Bioscience R&D ($ thousands)	$493,350	$41,972,205	III
Bioscience Share of Total R&D	70%	62%	I
Bioscience R&D Per Capita	$121	$130	II
NIH Funding, FY 2017			
Funding ($ thousands)	$312,178	$26,150,485	II
Funding Per Capita	$75	$80	II
Bioscience Venture Capital Investments, 2014-17 ($ millions)	$76.53	$66,168.62	III
Bioscience and Related Patents, 2014-17	1,274	102,862	III

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.

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Industry Subsector	Oregon		United States	
	2016	2014–2016 Change	2016	2014–2016 Change
Agricultural Feedstock and Industrial Biosciences				
Establishments	38	3.4%	1,709	-3.2%
Employment	546	0.5%	68,027	-1.2%
Location Quotient	0.62		n/a	
Direct-Effect Employment Multiplier	4.71			
Total Employment Impact	2,575			
Average Annual Wage	$59,271	-1.3%	$80,961	2.7%
Bioscience-Related Distribution				
Establishments	329	2.2%	39,149	3.8%
Employment	4,490	5.8%	469,640	3.7%
Location Quotient	0.74		n/a	
Direct-Effect Employment Multiplier	2.20			
Total Employment Impact	9,872			
Average Annual Wage	$65,578	2.6%	$93,677	2.7%
Drugs and Pharmaceuticals				
Establishments	45	12.5%	3,754	13.7%
Employment	844	7.8%	299,113	2.0%
Location Quotient	0.22		n/a	
Direct-Effect Employment Multiplier	4.81			
Total Employment Impact	4,056			
Average Annual Wage	$52,378	-8.8%	$113,815	-3.2%
Medical Devices and Equipment				
Establishments	109	-7.6%	8,083	5.9%
Employment	4,250	-0.1%	359,293	2.9%
Location Quotient	0.92		n/a	
Direct-Effect Employment Multiplier	2.71			
Total Employment Impact	11,504			
Average Annual Wage	$78,493	10.9%	$84,746	6.5%
Research, Testing and Medical Laboratories				
Establishments	417	15.7%	33,007	13.1%
Employment	3,270	3.9%	547,566	8.2%
Location Quotient	0.46		n/a	
Direct-Effect Employment Multiplier	1.96			
Total Employment Impact	6,394			
Average Annual Wage	$66,379	3.2%	$106,942	5.5%
Total Bioscience Industry				
Establishments	938	6.9%	85,702	7.7%
Employment	13,400	3.3%	1,743,639	4.4%
Location Quotient	0.60		n/a	
Direct-Effect Employment Multiplier	2.57			
Total Employment Impact	34,399			
Average Annual Wage	$68,781	4.7%	$98,961	3.1%
Total Private Sector				
Establishments	140,921	7.8%	9,243,034	3.4%
Employment	1,556,128	7.0%	120,884,570	4.2%
Average Annual Wage	$48,854	6.4%	$53,354	4.3%

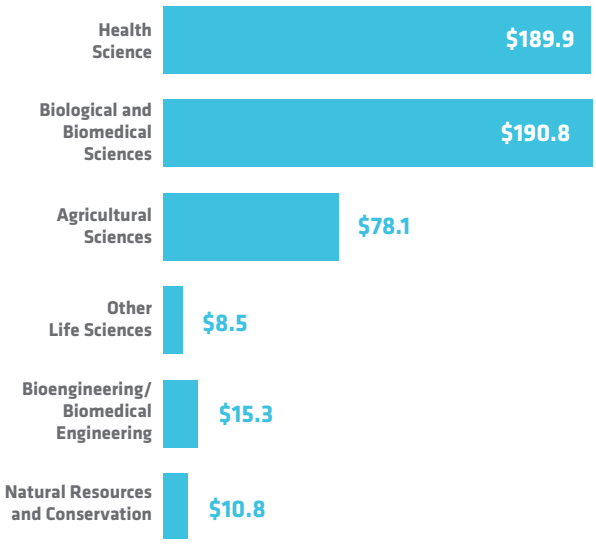
Note: U.S. employment metrics include Puerto Rico.

Bioscience Research in Oregon

Bioscience Academic R&D Expenditures

$ Millions

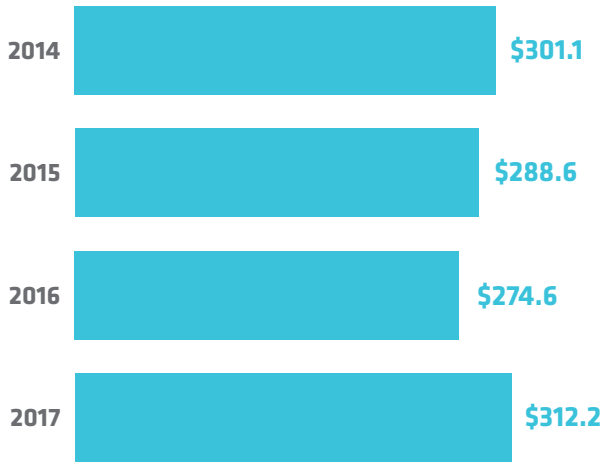
FY 2016



NIH Awards

$ Millions

FY 2014-2017

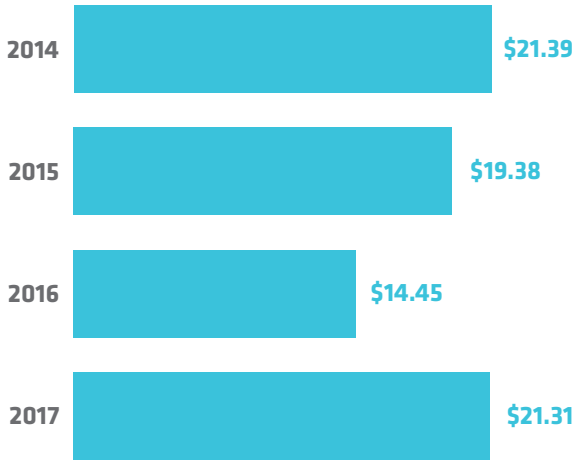


Bioscience Venture Capital in Oregon

Bioscience-Related Venture Capital Investments

$ Millions

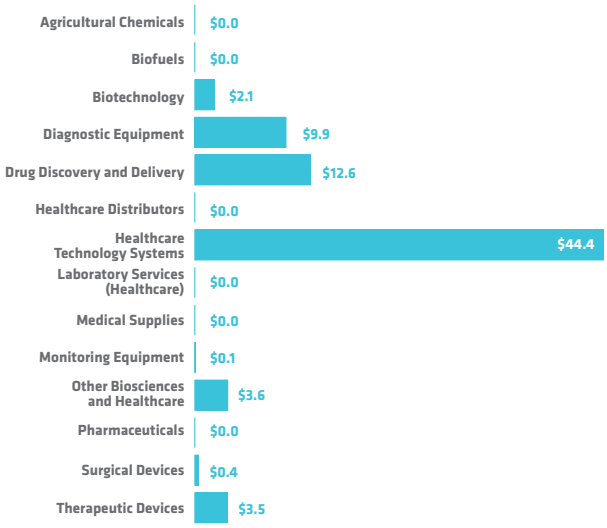
2014-2017



Bioscience-Related Venture Capital Investments by Segment

$ Millions

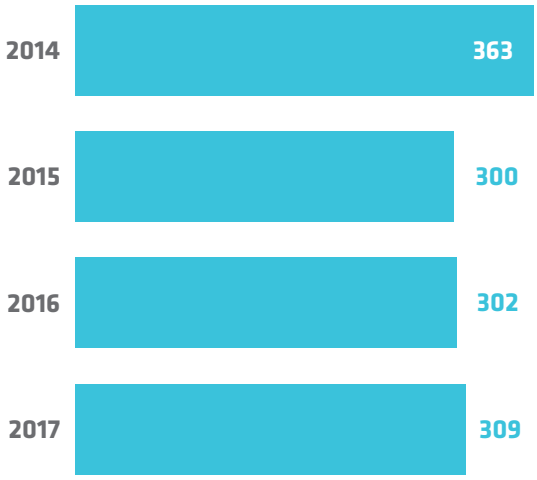
2014-2017



Bioscience Patents in Oregon

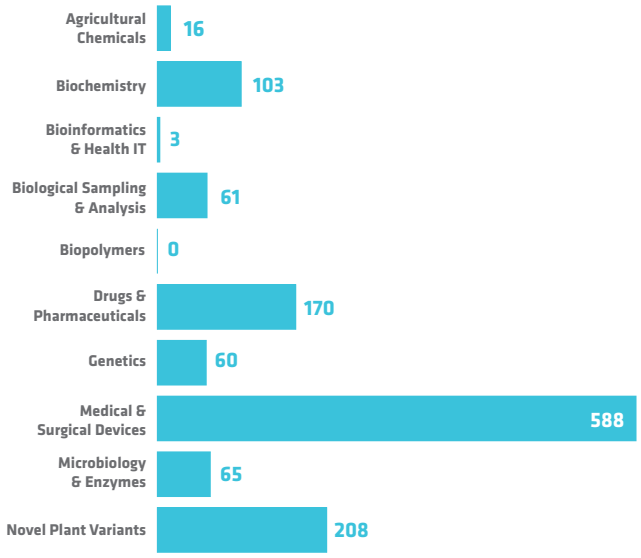
Bioscience-Related U.S. Patents

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.

TECONOMY PARTNERS LLC

Bio Biotechnology Innovation Organization

25 YEARS OF INNOVATION