TEConomy/BIO

The Value of Bioscience Innovation in Growing Jobs and Improving Quality of Life 2016

Connecticut

Connecticut has a sizable and highly concentrated bioscience industry with two specialized industry subsectors—medical devices and equipment and drugs and pharmaceuticals. While the state's bioscience industry has shed jobs overall since 2012, its research, testing, and medical labs subsector has seen strong job growth during the 2-year period, increasing by 23 percent. With $802 million in bioscience academic R&D expenditures, Connecticut's universities are advancing new discovery and technologies with a predominant focus in these life science fields—78 percent of all academic R&D in the state compared with a 61 percent national average. The state's bioscience research complex is highly concentrated with per capita academic R&D and NIH funding that stands among the top tier across all states.

Bioscience Performance Metrics

Summary of State Performance in Selected Bioscience-related Metrics

Metric	Connecticut	United States	Quintile
Bioscience Industry, 2014			
Bioscience Industry Employment	23,338	1,655,680	III
Bioscience Industry Location Quotient	1.15	n/a	II
Bioscience Industry Establishments	853	77,283	III
Academic Bioscience R&D Expenditures, FY 2014			
Bioscience R&D ($ thousands)	$802,460	$38,873,926	II
Bioscience Share of Total R&D	78%	61%	I
Bioscience R&D Per Capita	$223	$122	I
NIH Funding, FY 2015			
Funding ($ thousands)	$461,254	$22,869,746	II
Funding Per Capita	$128	$71	I
Bioscience Venture Capital Investments, 2012–15 ($ millions)	$980.0	$48,742.10	II
Bioscience and Related Patents, 2012–15	3,524	101,026	II

State ranking figures for bioscience performance metrics are calculated as quintiles, where:
top quintile — I II III IV V — bottom quintile

For source notes, see end of State Profile.

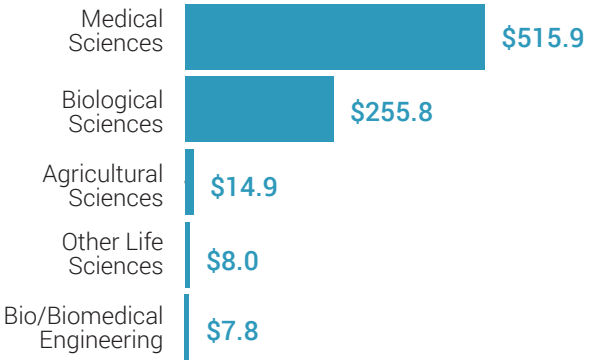
Connecticut

Industry Subsector	Connecticut 2014	Connecticut 2012–2014 Change	United States 2014	United States 2012–2014 Change
Agricultural Feedstock and Chemicals				
Establishments	12	9.1%	1,811	2.2%
Employment	299	32.6%	77,545	1.5%
Location Quotient	0.32		n/a	
Direct-Effect Employment Multiplier	14.9		18.4	
Total Employment Impact	4,442		1,432,125	
Average Annual Wage	$67,735	8.7%	$80,640	6.3%
Bioscience-Related Distribution				
Establishments	299	-5.5%	37,833	2.8%
Employment	4,157	-2.9%	452,325	2.3%
Location Quotient	0.75		n/a	
Direct-Effect Employment Multiplier	2.9		3.0	
Total Employment Impact	11,983		1,358,820	
Average Annual Wage	$92,924	4.6%	$90,458	6.2%
Drugs and Pharmaceuticals				
Establishments	32	-5.9%	3,301	8.0%
Employment	5,147	-16.6%	293,353	3.2%
Location Quotient	1.44		n/a	
Direct-Effect Employment Multiplier	10.2		11.0	
Total Employment Impact	52,731		3,242,627	
Average Annual Wage	$162,872	3.7%	$117,524	10.3%
Medical Devices and Equipment				
Establishments	128	-5.2%	7,636	5.5%
Employment	7,887	-10.2%	349,045	-0.1%
Location Quotient	1.85		n/a	
Direct-Effect Employment Multiplier	4.3		4.6	
Total Employment Impact	33,608		1,596,802	
Average Annual Wage	$73,926	0.4%	$79,537	5.1%
Research, Testing, and Medical Laboratories				
Establishments	381	3.9%	26,702	10.2%
Employment	5,848	23.4%	483,412	3.4%
Location Quotient	0.99		n/a	
Direct-Effect Employment Multiplier	3.0		3.1	
Total Employment Impact	17,792		1,554,719	
Average Annual Wage	$109,105	5.1%	$97,485	6.8%
Total Bioscience Industry				
Establishments	853	-1.3%	77,283	5.7%
Employment	23,338	-3.5%	1,655,680	2.2%
Location Quotient	1.15		n/a	
Direct-Effect Employment Multiplier	5.2		5.5	
Total Employment Impact	121,055		9,185,094	
Average Annual Wage	$105,662	2.2%	$94,543	7.2%
Total Private Sector				
Establishments	110,041	2.3%	8,937,672	2.7%
Employment	1,417,420	1.9%	116,018,300	4.4%
Average Annual Wage	$64,783	2.1%	$51,148	4.3%

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

Bioscience Research in Connecticut

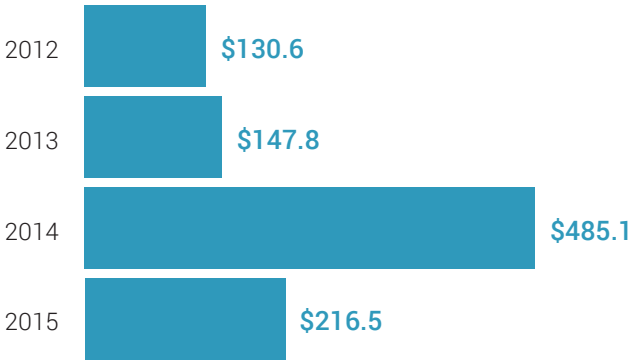
Bioscience Academic R&D Expenditures
$ Millions
FY 2014



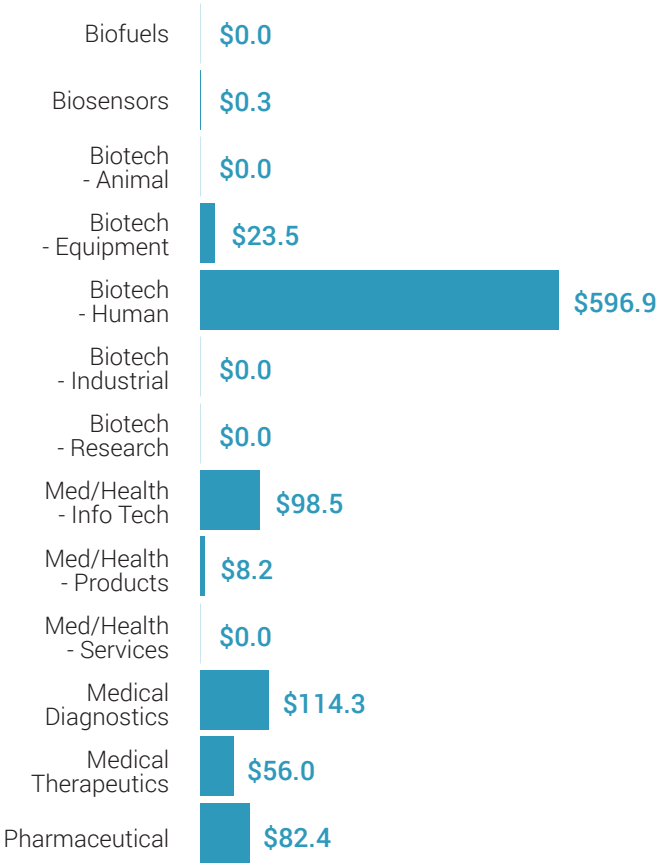
NIH Awards
$ Millions
FY 2012-2015

Bioscience Venture Capital in Connecticut

Bioscience-Related Venture Capital Investments
$ Millions
2012-2015



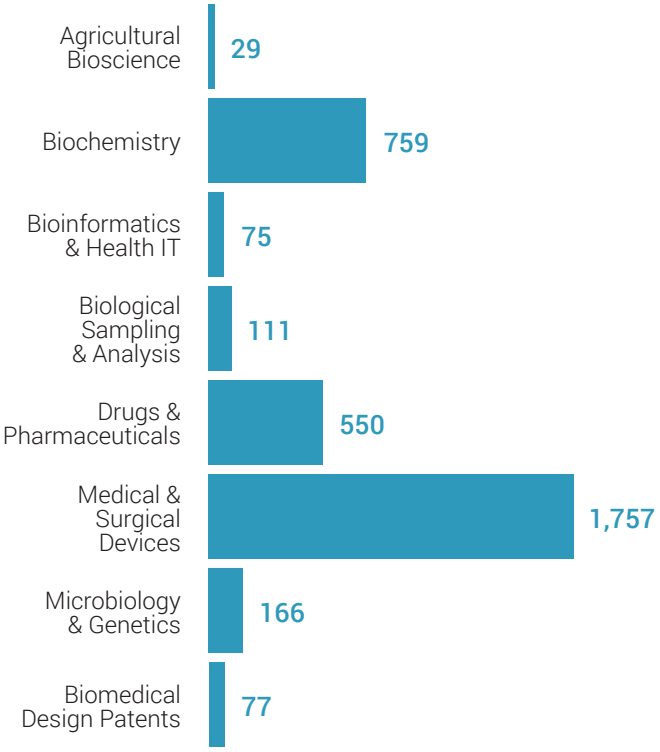
Bioscience-Related Venture Capital Investments by Segment
$ Millions
2012-2015



Bioscience Patents in Connecticut

Bioscience-Related U.S. Patents
2012-2015

Bioscience-Related U.S. Patents by Segment
2012-2015



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).

Venture Capital: Thomson Reuters Thomson ONE venture capital database.

Patents: U.S. Patent & Trademark Office data from Thomson Reuters Thomson Innovation patent analysis database.

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

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Innovating Tomorrow's Economic Landscape

Bio Biotechnology Innovation Organization