



TEconomy/BIO

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

Texas

Texas has a large bioscience industry that reached more than 81,000 jobs in 2014 across 4,865 business establishments. Texas’ bioscience industry has grown its employment base by nearly 1 percent since 2012, with job growth in four of its five major subsectors during this period. Texas is among the top tier of states in the size of its bioscience and biomedical research and innovation base. The state’s research universities combined to conduct \$3 billion in bioscience academic R&D in 2014. Funding from NIH to Texas institutions (both academic and non-academic) totaled \$1 billion in 2015. Texas also is among the national leaders in the levels of venture capital invested in its bioscience companies and in bioscience-related patenting since 2012. The state’s patent totals have been increasing in recent years and primarily focused in medical and surgical devices, drugs and pharmaceuticals, biochemistry, and microbiology and genetics.

Bioscience Performance Metrics

Summary of State Performance in Selected Bioscience-related Metrics

Metric	Texas	United States	Quintile
Bioscience Industry, 2014			
Bioscience Industry Employment	81,472	1,655,680	I
Bioscience Industry Location Quotient	0.60	n/a	IV
Bioscience Industry Establishments	4,865	77,283	I
Academic Bioscience R&D Expenditures, FY 2014			
Bioscience R&D (\$ thousands)	\$3,011,942	\$38,873,926	I
Bioscience Share of Total R&D	65%	61%	II
Bioscience R&D Per Capita	\$112	\$122	III
NIH Funding, FY 2015			
Funding (\$ thousands)	\$1,004,412	\$22,869,746	I
Funding Per Capita	\$37	\$71	III
Bioscience Venture Capital Investments, 2012–15 (\$ millions)	\$1,664.3	\$48,742.10	I
Bioscience and Related Patents, 2012–15	4,521	101,026	I

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.



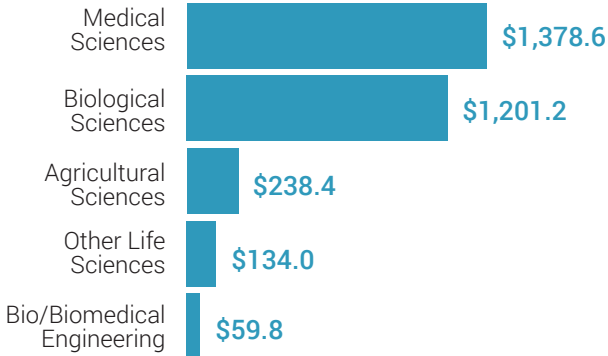
Industry Subsector	Texas		United States	
	2014	2012–2014 Change	2014	2012–2014 Change
Agricultural Feedstock and Chemicals				
Establishments	153	0.0%	1,811	2.2%
Employment	5,134	0.5%	77,545	1.5%
Location Quotient	0.80		n/a	
Direct-Effect Employment Multiplier	18.4		18.4	
Total Employment Impact	94,303		1,432,125	
Average Annual Wage	\$96,989	1.8%	\$80,640	6.3%
Bioscience-Related Distribution				
Establishments	2,702	4.2%	37,833	2.8%
Employment	33,335	-2.3%	452,325	2.3%
Location Quotient	0.89		n/a	
Direct-Effect Employment Multiplier	3.1		3.0	
Total Employment Impact	104,480		1,358,820	
Average Annual Wage	\$94,677	12.5%	\$90,458	6.2%
Drugs and Pharmaceuticals				
Establishments	155	0.0%	3,301	8.0%
Employment	10,677	7.5%	293,353	3.2%
Location Quotient	0.44		n/a	
Direct-Effect Employment Multiplier	11.8		11.0	
Total Employment Impact	126,240		3,242,627	
Average Annual Wage	\$103,113	-2.3%	\$117,524	10.3%
Medical Devices and Equipment				
Establishments	394	1.5%	7,636	5.5%
Employment	10,764	3.2%	349,045	-0.1%
Location Quotient	0.37		n/a	
Direct-Effect Employment Multiplier	4.6		4.6	
Total Employment Impact	49,521		1,596,802	
Average Annual Wage	\$70,554	2.2%	\$79,537	5.1%
Research, Testing, and Medical Laboratories				
Establishments	1,461	10.8%	26,702	10.2%
Employment	21,562	1.7%	483,412	3.4%
Location Quotient	0.54		n/a	
Direct-Effect Employment Multiplier	3.1		3.1	
Total Employment Impact	66,569		1,554,719	
Average Annual Wage	\$74,581	0.3%	\$97,485	6.8%
Total Bioscience Industry				
Establishments	4,865	5.6%	77,283	5.7%
Employment	81,472	0.8%	1,655,680	2.2%
Location Quotient	0.60		n/a	
Direct-Effect Employment Multiplier	5.5		5.5	
Total Employment Impact	449,048		9,185,094	
Average Annual Wage	\$87,423	5.4%	\$94,543	7.2%
Total Private Sector				
Establishments	603,774	4.7%	8,937,672	2.7%
Employment	9,589,897	7.0%	116,018,300	4.4%
Average Annual Wage	\$54,223	5.1%	\$51,148	4.3%

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

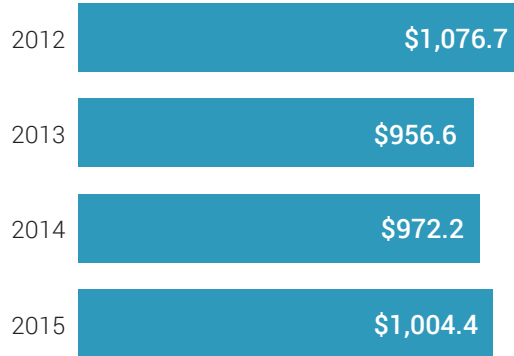


Bioscience Research in Texas

Bioscience Academic R&D Expenditures
\$ Millions
FY 2014

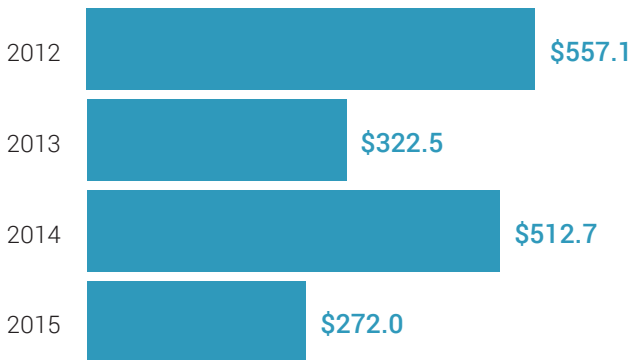


NIH Awards
\$ Millions
FY 2012-2015

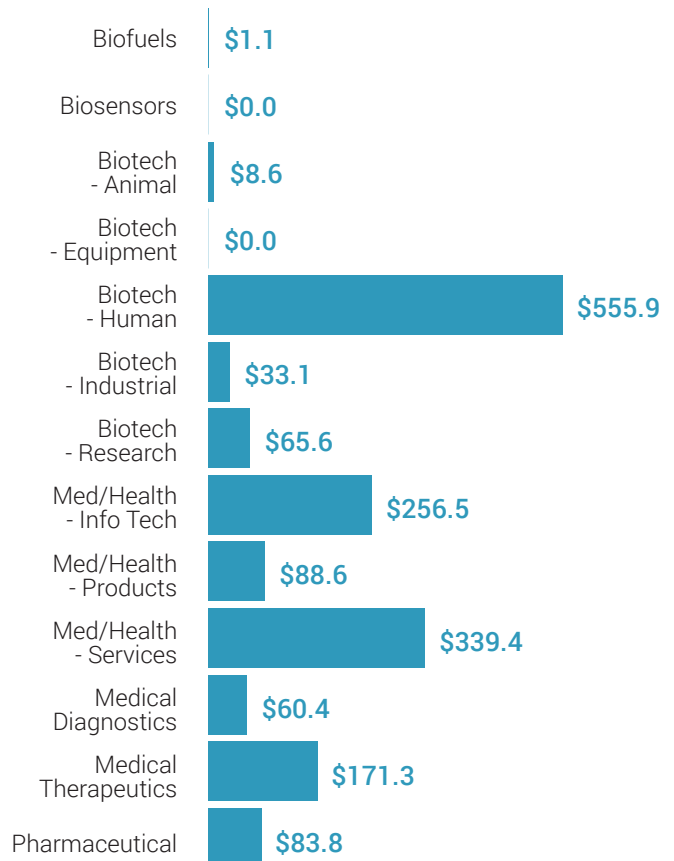


Bioscience Venture Capital in Texas

Bioscience-Related Venture
Capital Investments
\$ Millions
2012-2015



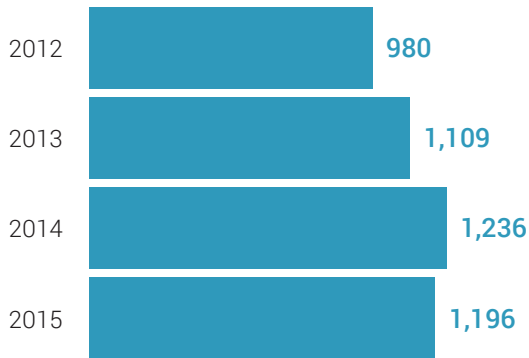
Bioscience-Related Venture
Capital Investments by Segment
\$ Millions
2012-2015



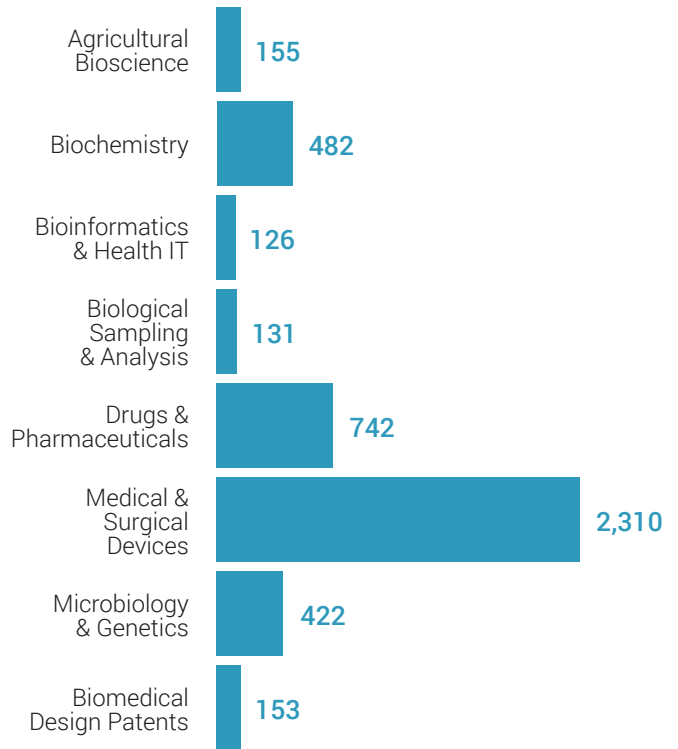


Bioscience Patents in Texas

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.

