



Texas' large bioscience industry is growing and in 2016 employed nearly 90,000 across more than 5,500 business establishments. With employment growth of 8.6 percent and establishment growth of 10.7 percent since 2014, Texas has outpaced national growth for the bioscience industry overall, as well as in three of the five major subsectors. More than 40 percent of Texas' bioscience employment is within the bioscience-related distribution subsector. Texas is among the top tier of states in several key measures of the industry's innovation ecosystem including in academic R&D expenditures at nearly \$3.3 billion in 2016; NIH funding at nearly \$1.2 billion in FY 2017; in venture capital investments at nearly \$1.6 billion from 2014-17; and in patent awards where 4,704 were awarded to state inventors since 2014.

Bioscience Performance Metrics

Summary of State Performance in Selected Bioscience-related Metrics

Metric	Texas	United States	Quintile
Bioscience Industry, 2016			
Bioscience Industry Employment	89,746	1,743,639	I
Bioscience Industry Location Quotient	0.63	n/a	IV
Bioscience Industry Establishments	5,578	85,702	I
Academic Bioscience R&D Expenditures, FY 2016			
Bioscience R&D (\$ thousands)	\$3,276,218	\$41,972,205	I
Bioscience Share of Total R&D	66%	62%	II
Bioscience R&D Per Capita	\$117	\$130	III
NIH Funding, FY 2017			
Funding (\$ thousands)	\$1,160,645	\$26,150,485	I
Funding Per Capita	\$41	\$80	III
Bioscience Venture Capital Investments, 2014-17 (\$ millions)	\$1,591.28	\$66,168.62	I
Bioscience and Related Patents, 2014-17	4,704	102,862	I

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	Texas		United States	
	2016	2014-2016 Change	2016	2014-2016 Change
Agricultural Feedstock and Industrial Biosciences				
Establishments	143	-5.3%	1,709	-3.2%
Employment	5,062	-0.7%	68,027	-1.2%
Location Quotient	0.90		n/a	
Direct-Effect Employment Multiplier	6.95			
Total Employment Impact	35,198			
Average Annual Wage	\$97,746	0.7%	\$80,961	2.7%
Bioscience-Related Distribution				
Establishments	2,969	6.9%	39,149	3.8%
Employment	38,181	9.1%	469,640	3.7%
Location Quotient	0.99		n/a	
Direct-Effect Employment Multiplier	2.41			
Total Employment Impact	92,017			
Average Annual Wage	\$97,300	1.8%	\$93,677	2.7%
Drugs and Pharmaceuticals				
Establishments	181	16.8%	3,754	13.7%
Employment	11,652	9.1%	299,113	2.0%
Location Quotient	0.47		n/a	
Direct-Effect Employment Multiplier	6.41			
Total Employment Impact	74,704			
Average Annual Wage	\$95,051	-7.8%	\$113,815	-3.2%
Medical Devices and Equipment				
Establishments	434	10.2%	8,083	5.9%
Employment	10,859	0.9%	359,293	2.9%
Location Quotient	0.37		n/a	
Direct-Effect Employment Multiplier	3.03			
Total Employment Impact	32,864			
Average Annual Wage	\$76,294	8.1%	\$84,746	6.5%
Research, Testing and Medical Laboratories				
Establishments	1,851	18.5%	33,007	13.1%
Employment	23,993	13.7%	547,566	8.2%
Location Quotient	0.53		n/a	
Direct-Effect Employment Multiplier	2.29			
Total Employment Impact	54,925			
Average Annual Wage	\$78,914	7.3%	\$106,942	5.5%
Total Bioscience Industry				
Establishments	5,578	10.7%	85,702	7.7%
Employment	89,746	8.6%	1,743,639	4.4%
Location Quotient	0.63		n/a	
Direct-Effect Employment Multiplier	3.23			
Total Employment Impact	289,708			
Average Annual Wage	\$89,576	2.1%	\$98,961	3.1%
Total Private Sector				
Establishments	637,507	5.6%	9,243,034	3.4%
Employment	9,954,164	3.8%	120,884,570	4.2%
Average Annual Wage	\$55,059	1.5%	\$53,354	4.3%

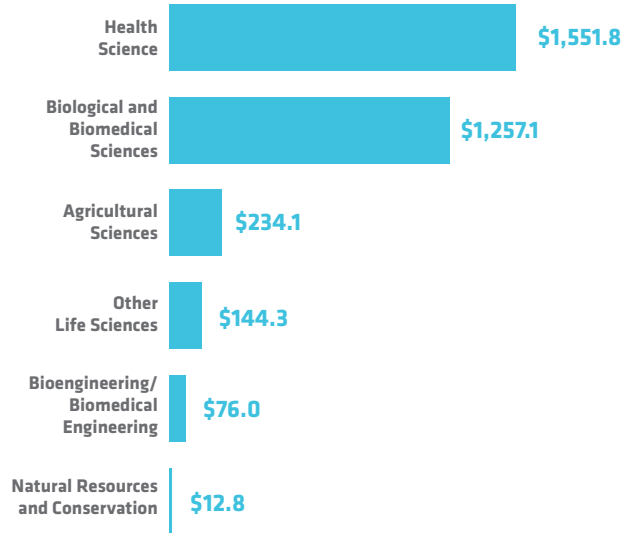
Note: U.S. employment metrics include Puerto Rico.

Bioscience Research in Texas

Bioscience Academic R&D Expenditures

\$ Millions

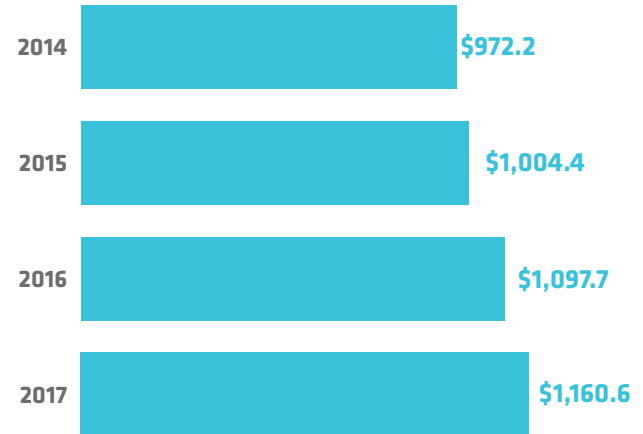
FY 2016



NIH Awards

\$ Millions

FY 2014-2017

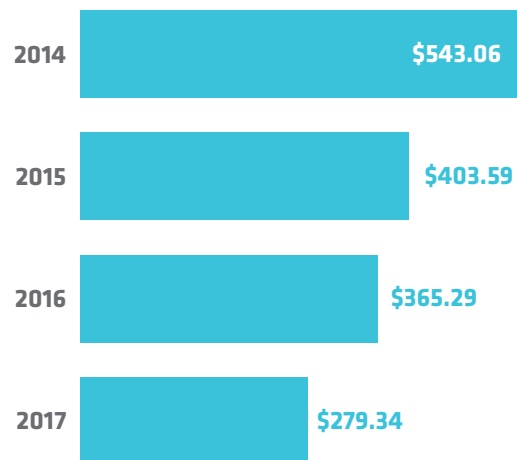


Bioscience Venture Capital in Texas

Bioscience-Related Venture Capital Investments

\$ Millions

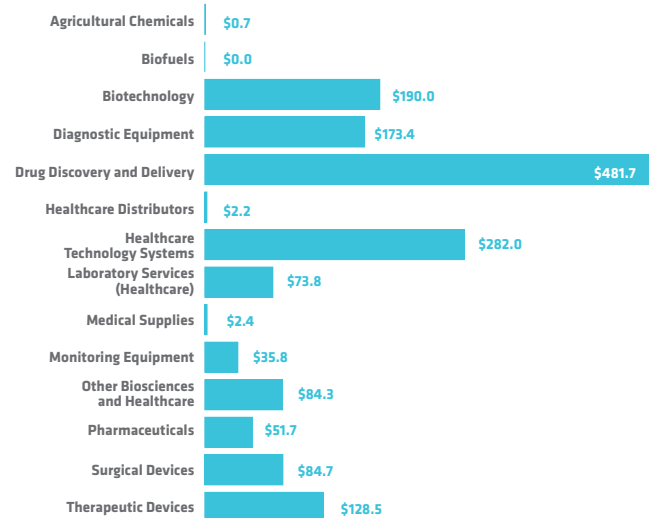
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Bioscience-Related Venture Capital Investments by Segment

\$ Millions

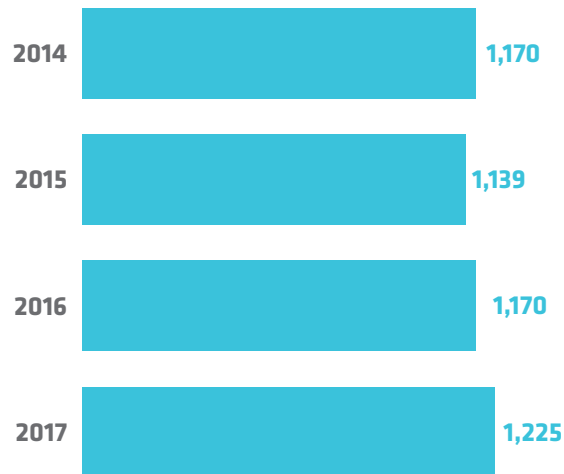
2014-2017



Bioscience Patents in Texas

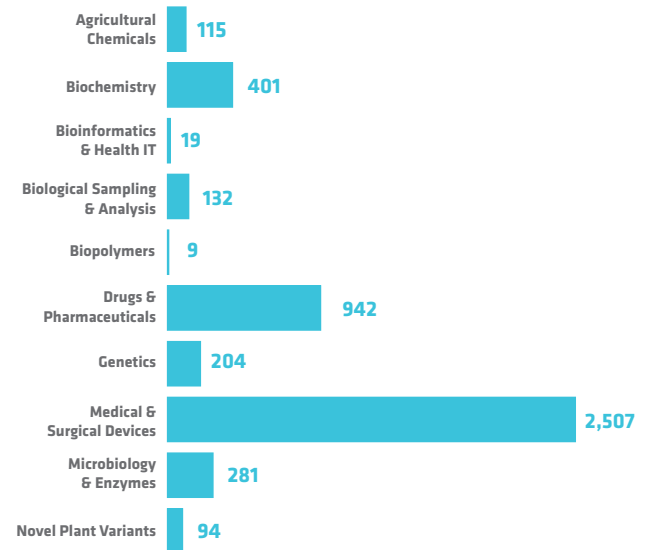
Bioscience-Related U.S. Patents

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.