



Texas

The Bioscience Economy: Propelling Life-Saving Treatments, Supporting State & Local Communities

Texas' bioscience industry continues to grow at a rapid pace, increasing its employment by 11.5 percent since 2016 to reach just over 100,000 jobs in 2018 across 6,263 business establishments. Each of the five industry subsectors in the state have increased employment and contributed to the overall job gains. Texas is among the top tier of states not only in the size of its industry but in several key measures of the industry's innovation ecosystem, including: academic R&D expenditures at \$3.5 billion in 2018; NIH funding at nearly \$1.4 billion in 2019; in venture capital investments at \$2.3 billion from 2016-19; and in patent awards where 4,950 were awarded to state inventors since 2016.

Bioscience Performance Metrics

Summary of State Performance in Selected Bioscience-related Metrics

Metric	Texas	United States	Quintile
Bioscience Industry, 2018			
Bioscience Industry Employment	100,070	1,869,955	I
Bioscience Industry Location Quotient	0.64	n/a	IV
Bioscience Industry Establishments	6,263	101,143	I
Academic Bioscience R&D Expenditures, FY 2018			
Academic Bioscience R&D (\$ thousands)	\$3,549,900	\$47,183,197	I
Bioscience Share of Total Academic R&D	67%	63%	II
Academic Bioscience R&D Per Capita	\$124	\$144	III
NIH Funding, FY 2019			
Funding (\$ thousands)	\$1,370,181	\$30,886,675	I
Funding Per Capita	\$47	\$94	IV
Bioscience Venture Capital Investments, 2016-19 (\$ millions)	\$2,336.87	\$102,728.33	I
Bioscience-Related Patents, 2016-19	4,950	108,438	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.

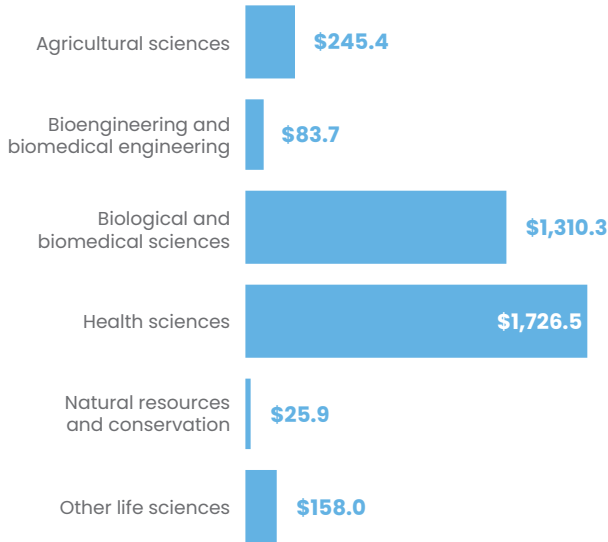
Industry Subsector	Texas		United States	
	2018	2016–2018 Change	2018	2016–2018 Change
Agricultural Feedstock and Industrial Biosciences				
Establishments	147	2.8%	1,785	4.4%
Employment	5,207	2.9%	68,642	0.9%
Location Quotient	0.91		n/a	
Direct-Effect Employment Multiplier	6.99			
Total Employment Impact	36,388			
Average Annual Wage	\$103,630	6.0%	\$83,151	2.7%
Bioscience-Related Distribution				
Establishments	3,457	16.4%	51,582	31.8%
Employment	46,245	21.1%	545,055	16.1%
Location Quotient	1.02		n/a	
Direct-Effect Employment Multiplier	4.18			
Total Employment Impact	193,288			
Average Annual Wage	\$109,126	12.2%	\$105,905	13.1%
Drugs and Pharmaceuticals				
Establishments	232	28.2%	4,451	18.6%
Employment	12,494	7.2%	308,357	3.1%
Location Quotient	0.49		n/a	
Direct-Effect Employment Multiplier	5.39			
Total Employment Impact	67,322			
Average Annual Wage	\$101,832	7.1%	\$113,544	-0.2%
Medical Devices and Equipment				
Establishments	529	21.9%	8,753	8.3%
Employment	11,337	4.4%	378,431	5.3%
Location Quotient	0.36		n/a	
Direct-Effect Employment Multiplier	2.98			
Total Employment Impact	33,827			
Average Annual Wage	\$82,482	8.1%	\$90,541	6.8%
Research, Testing, and Medical Laboratories				
Establishments	1,898	2.6%	34,572	4.7%
Employment	24,787	3.3%	569,470	4.0%
Location Quotient	0.52		n/a	
Direct-Effect Employment Multiplier	2.46			
Total Employment Impact	61,047			
Average Annual Wage	\$84,926	7.6%	\$120,320	12.5%
Total Bioscience Industry				
Establishments	6,263	12.3%	101,143	18.0%
Employment	100,070	11.5%	1,869,955	7.2%
Location Quotient	0.64		n/a	
Direct-Effect Employment Multiplier	3.92			
Total Employment Impact	391,872			
Average Annual Wage	\$98,917	10.4%	\$107,610	8.7%
Total Private Sector				
Establishments	677,560	5.7%	9,776,674	3.1%
Employment	10,427,255	4.7%	125,195,944	3.3%
Average Annual Wage	\$58,627	6.5%	\$57,043	6.9%

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

Bioscience Research in Texas

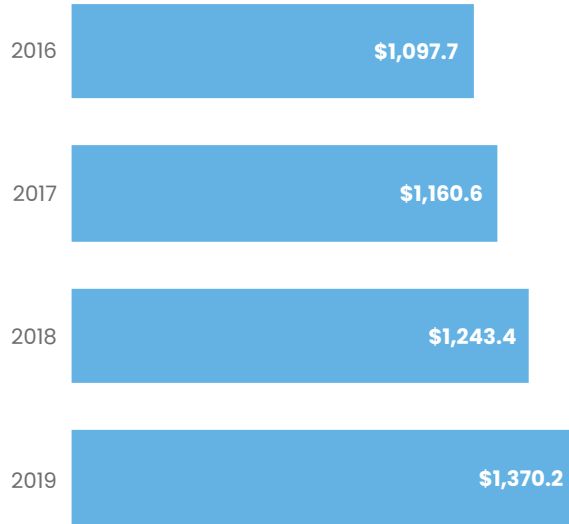
Bioscience Academic R&D Expenditures

\$ Millions, FY 2018



NIH Awards

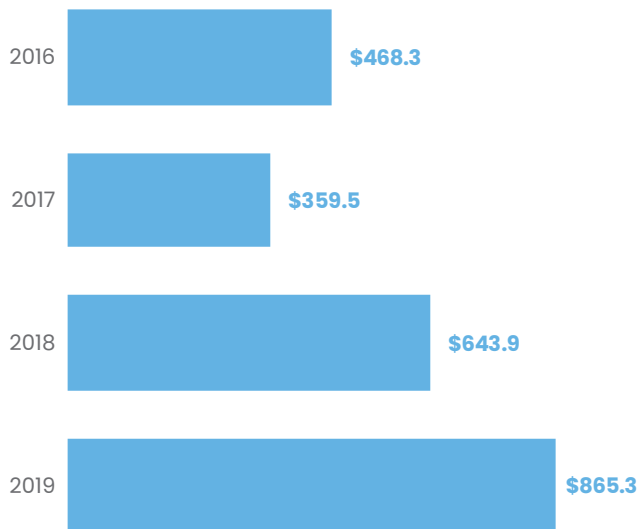
\$ Millions, FY 2016-2019



Bioscience Venture Capital in Texas

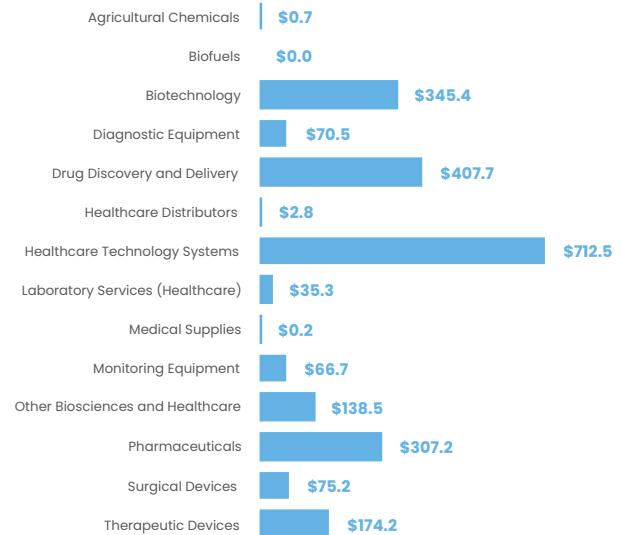
Bioscience-Related Venture Capital Investments

\$ Millions, 2016-2019



Bioscience-Related Venture Capital Investments by Segment

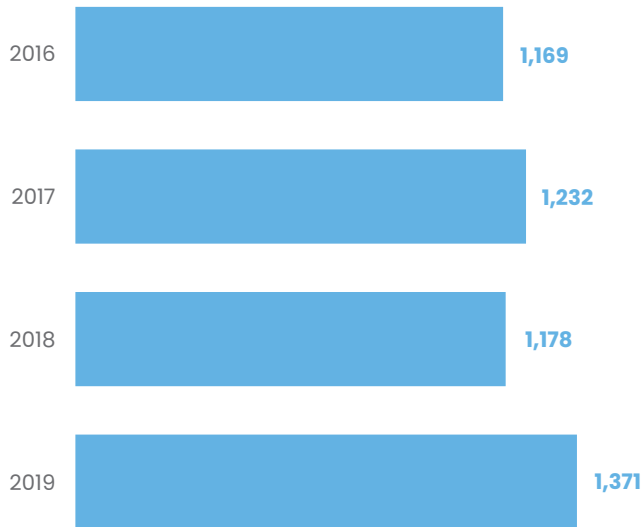
\$ Millions, 2016-2019



Bioscience Patents in Texas

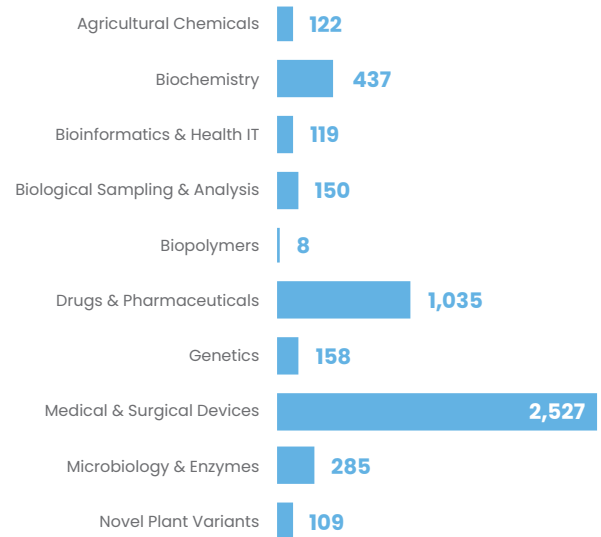
Bioscience-Related U.S. Patents

2016–2019



Bioscience-Related U.S. Patents by Segment

2016–2019



Source Notes

Employment, Establishments and Wages: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW), enhanced file from IMPLAN Group, LLC.

Employment Multipliers: state-level Input/Output models from IMPLAN Group, LLC.

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.