



California

The U.S. Bioscience Industry: Fostering Innovation and Driving America's Economy Forward

California continues to be a leading, highly specialized, and rapidly growing biosciences state. The state's bioscience industry employment base grew by 13.1 percent, outpacing the national growth rate and reaching nearly 335,000 jobs in 2021. All five of the major bioscience industry subsectors added jobs during this period. California is 33 percent more concentrated in bioscience industry employment compared with the national average (location quotient is 1.33), and its industry strengths are diverse, with specialized employment concentrations in three of the five major subsectors—medical devices; research, testing and medical labs; and pharmaceuticals. In addition to industry strengths, California is among the top tier of states in nearly all measures of the industry's innovation ecosystem including academic R&D expenditures, NIH funding, venture capital investments, and patent awards.

Bioscience Performance Metrics

Summary of State Performance in Selected Bioscience-related Metrics

Metric	California	United States	Quintile
Bioscience Industry, 2021			
Bioscience Industry Employment	334,690	2,135,704	I
Bioscience Industry Location Quotient	1.33	n/a	I
Bioscience Industry Establishments	14,268	127,389	I
Academic Bioscience R&D Expenditures, FY 2020			
Bioscience R&D (\$ thousands)	\$7,026,530	\$51,108,737	I
Bioscience Share of Total R&D	67%	63%	II
Bioscience R&D Per Capita	\$178	\$154	II
NIH Funding, FY 2021			
Funding (\$ thousands)	\$5,108,133	\$34,751,109	I
Funding Per Capita	\$130	\$105	I
Bioscience Venture Capital Investments, 2018-21 (\$ millions)			
	\$79,325.57	\$197,674.54	I
Bioscience-Related Patents, 2018-21			
	34,389	153,072	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.

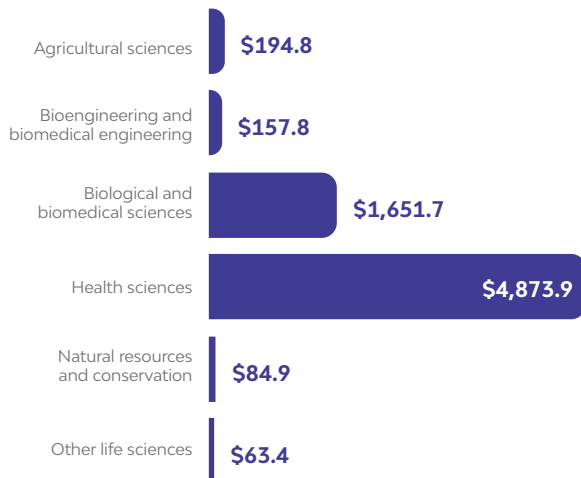
Industry Subsector		California		United States	
		2021	2018–2021 Change	2021	2018–2021 Change
Agricultural Feedstock and Industrial Biosciences	Establishments	190	22.3%	1,948	10.0%
	Employment	4,092	12.7%	69,573	1.9%
	<i>Location Quotient</i>	0.50		n/a	
	Average Annual Wage	\$78,920	12.5%	\$91,989	13.1%
Bioscience- Related Distribution	Establishments	5,641	8.9%	62,697	14.7%
	Employment	67,180	2.2%	602,589	6.6%
	<i>Location Quotient</i>	0.94		n/a	
	Average Annual Wage	\$125,434	15.7%	\$121,606	15.0%
Medical Devices and Equipment	Establishments	1,556	10.8%	10,268	17.4%
	Employment	77,510	10.1%	398,847	5.5%
	<i>Location Quotient</i>	1.65		n/a	
	Average Annual Wage	\$132,433	15.8%	\$98,481	8.7%
Pharmaceuticals	Establishments	812	28.1%	5,973	34.7%
	Employment	49,252	5.4%	344,839	11.9%
	<i>Location Quotient</i>	1.21		n/a	
	Average Annual Wage	\$162,960	12.4%	\$126,153	10.3%
Research, Testing, and Medical Laboratories	Establishments	6,069	25.0%	46,503	34.5%
	Employment	136,656	24.7%	719,856	19.3%
	<i>Location Quotient</i>	1.61		n/a	
	Average Annual Wage	\$201,782	22.9%	\$147,396	22.0%
Total Bioscience Industry	Establishments	14,268	16.7%	127,389	22.3%
	Employment	334,690	13.1%	2,135,704	11.0%
	<i>Location Quotient</i>	1.33		n/a	
	Average Annual Wage	\$163,181	20.2%	\$125,750	16.4%
Total Private Sector	Establishments	1,625,357	7.1%	10,665,643	9.3%
	Employment	14,574,527	-2.0%	123,376,557	-1.5%
	<i>Location Quotient</i>	1.00		n/a	
	Average Annual Wage	\$86,463	26.8%	\$67,826	18.9%

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

Bioscience Research in California

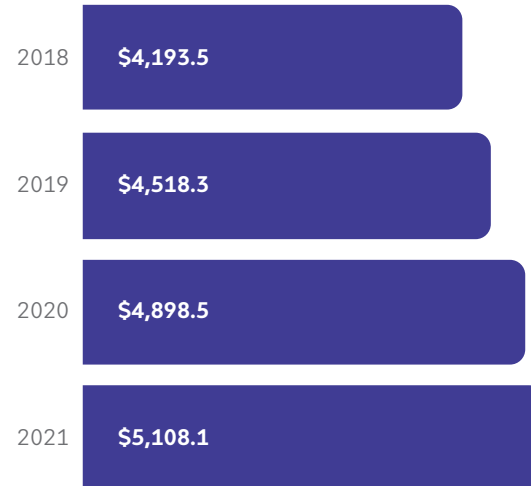
Bioscience Academic R&D Expenditures

\$ Millions, FY 2020



NIH Awards

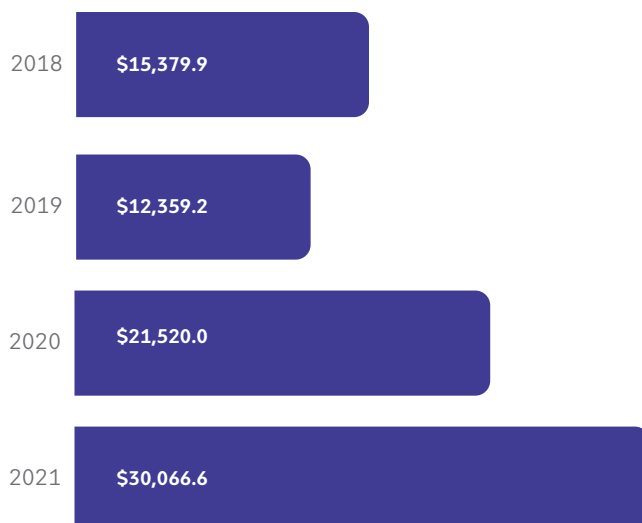
\$ Millions, FY 2018-2021



Bioscience Venture Capital in California

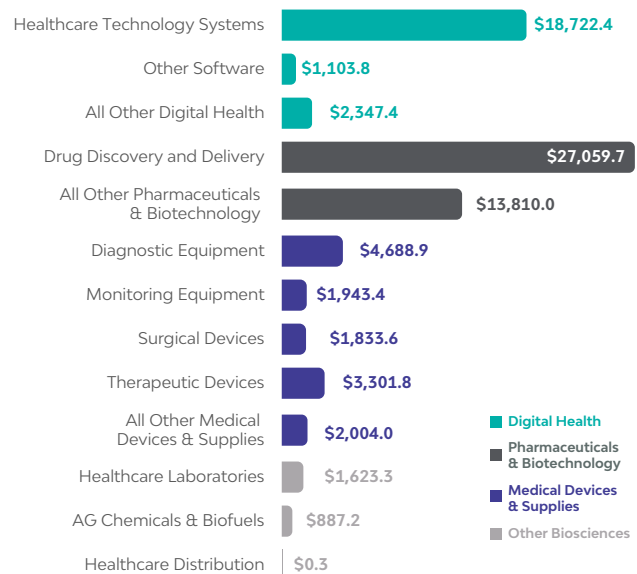
Bioscience-Related Venture Capital Investments

\$ Millions, 2018-2021



Bioscience-Related Venture Capital Investments by Segment

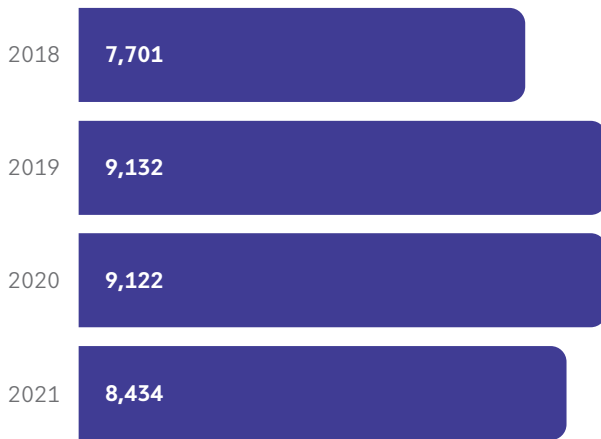
\$ Millions, 2018-2021



Bioscience Patents in California

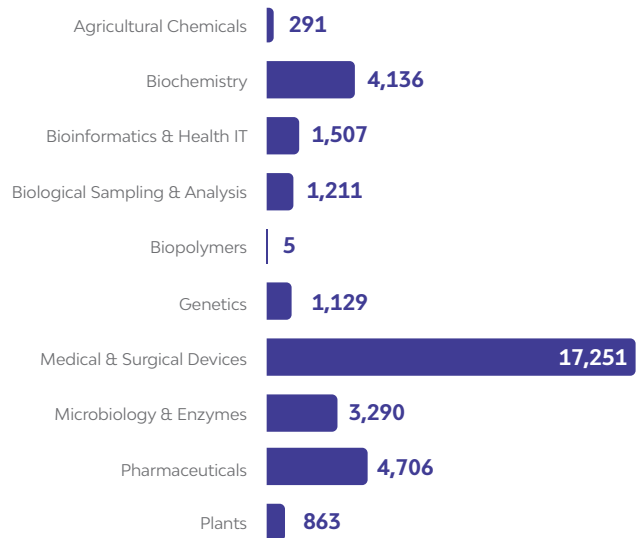
Bioscience-Related U.S. Patents

2018-2021



Bioscience-Related U.S. Patents by Segment

2018-2021



Source Notes

Employment, Establishments and Wages: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW), enhanced by Lightcast (Datarun 2022.3).

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.