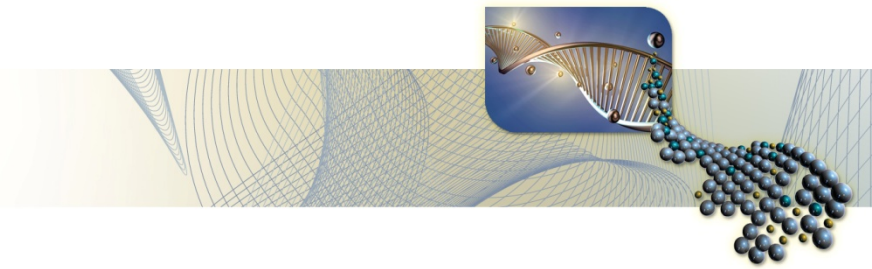


CALIFORNIA



California is specialized in total bioscience employment (location quotient of 1.36) and has outpaced overall national growth in the sector since 2001. California's employment exceeded 10 percent of the 2008 national total in three of the four bioscience subsectors, each of which also shows strong employment specialization: drugs and pharmaceuticals (location quotient of 1.21), medical devices and equipment (1.47) and research, testing, and medical laboratories (1.57). Across most of the key performance metrics tracked in this report, the State leads the nation. Academic research expenditures in biosciences grew at 31 percent over four years, reaching a total of \$4.4 billion in 2008. California institutions saw baseline NIH funding decline in 2009, although the additional funds from the American Recovery and Reinvestment Act (ARRA) boosted the total to show an overall increase since 2004. The State has a large biomedical infrastructure, leading the nation in terms of active clinical trials hosted in 2009 with 1,353. The State's \$23 billion in venture capital investments over the last six years and its 23,162 patents are both well diversified over a wide range of fields.

●●● Bioscience Performance Metrics

Summary of State Performance in Selected Bioscience-related Metrics

Metrics	California	United States	Rank*
Bioscience Industry, 2008			
Total Bioscience Industry Employment, 2008	221,096	1,420,324	I
Bioscience Industry Location Quotient, 2008	1.36	n/a	I
Biosciences Industry Establishments, 2008	6,066	47,593	I
Academic R&D Expenditures, FY 2008			
Bioscience R&D (\$ thousands)	\$4,395,602	\$31,818,810	1
Bioscience Share of Total R&D	62.6%	61.3%	23
Bioscience R&D Per Capita	\$120.16	\$104.54	15
Change in Bioscience R&D, FY 2004–08	31.0%	22.3%	10
NIH Funding, FY 2009			
Total, Including ARRA Funds (\$ thousands)	\$3,852,298	\$25,837,590	1
Per Capita Funding	\$104.22	\$84.16	11
Change in Baseline Funding, FY 2004–09**	-10.7%	-4.7%	41
Change in Total Funding, FY 2004–09	7.1%	14.6%	42
Clinical Trials, Initiated 2009	1,353	5,299	1
Higher Education Degrees in Bioscience Fields, AY 2008	19,999	161,811	1
Employment in Bioscience-related Occupations, 2008	91,670	717,510	1
Bioscience Venture Capital Investments, 2004–09 (\$ millions)	\$22,912.3	\$60,099	1
Bioscience and Related Patents, 2004–09	23,162	75,593	1

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile). All other metrics are ranked 1-52.

**Baseline Funding does not include American Recovery and Reinvestment Act (ARRA) funds for 2009.

For source notes, see end of State Profile.

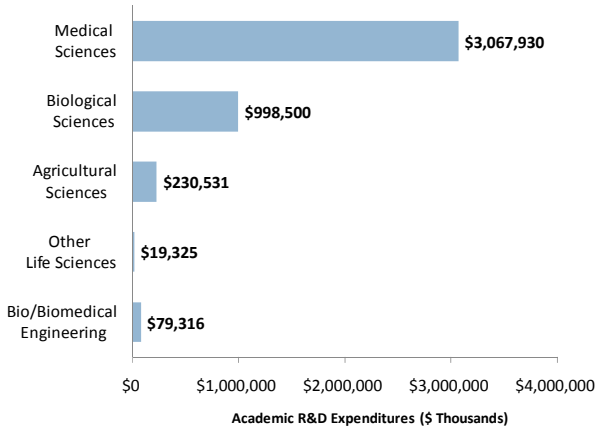
●●● Bioscience Industry Base, 2008

INDUSTRY SUBSECTOR	California		United States	
	2008	2001-08 Change	2008	2001-08 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS				
Establishments	163	-24.1%	2,440	16.0%
Employment	4,581	-3.8%	114,793	1.9%
Location Quotient	0.35		n/a	
Direct-Effect Employment Multiplier	5.70		11.33	
Total Employment Impact	26,095		1,284,650	
Average Annual Wage	\$59,943		\$72,279	
DRUGS & PHARMACEUTICALS				
Establishments	395	-8.6%	2,771	6.4%
Employment	43,038	9.9%	311,882	2.3%
Location Quotient	1.21		n/a	
Direct-Effect Employment Multiplier	7.01		9.92	
Total Employment Impact	301,490		2,873,278	
Average Annual Wage	\$109,128		\$93,378	
MEDICAL DEVICES & EQUIPMENT				
Establishments	2,023	-14.5%	15,227	0.4%
Employment	73,344	-5.2%	435,509	2.0%
Location Quotient	1.47		n/a	
Direct-Effect Employment Multiplier	3.68		4.87	
Total Employment Impact	269,764		2,029,581	
Average Annual Wage	\$79,580		\$63,606	
RESEARCH, TESTING, & MEDICAL LABORATORIES				
Establishments	3,485	42.6%	27,154	57.7%
Employment	100,132	50.2%	558,140	46.1%
Location Quotient	1.57		n/a	
Direct-Effect Employment Multiplier	2.69		3.30	
Total Employment Impact	269,015		1,853,127	
Average Annual Wage	\$97,739		\$80,785	
TOTAL BIOSCIENCES INDUSTRY				
Establishments	6,066	11.1%	47,593	28.3%
Employment	221,096	17.6%	1,420,324	15.8%
Location Quotient	1.36		n/a	
Direct-Effect Employment Multiplier	3.92		5.82	
Total Employment Impact	866,363		8,040,636	
Average Annual Wage	\$93,149		\$77,595	
TOTAL PRIVATE SECTOR				
Establishments	1,295,590	25.0%	8,860,956	13.8%
Employment	13,042,130	3.0%	113,917,377	3.5%
Average Annual Wage	\$50,706		\$45,229	

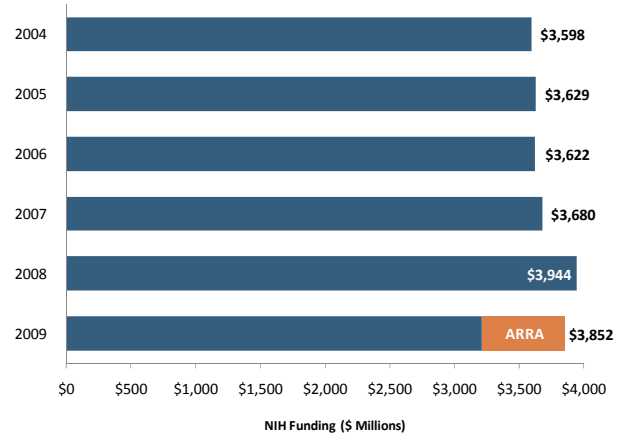
Note: U.S. employment metrics include Puerto Rico. Estimates of total employment impacts do not include Puerto Rico.

Bioscience Performance Metrics

Bioscience Academic R&D Expenditures in California, FY 2008

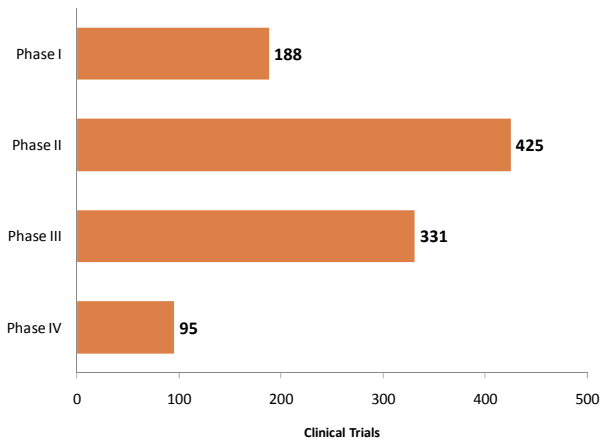


NIH Awards in California, 2004–2009

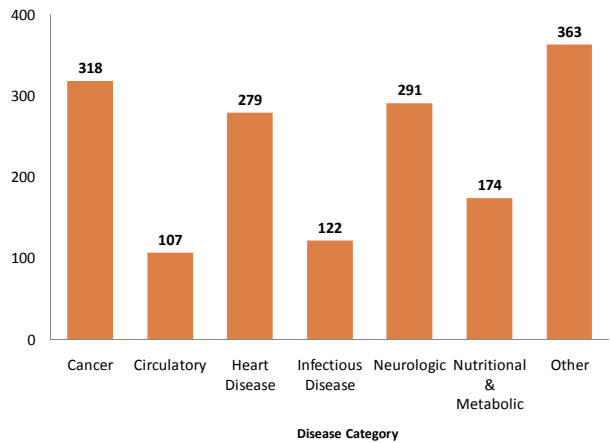


Recent Clinical Trial Activities

Clinical Trials by Phase in California, 2009

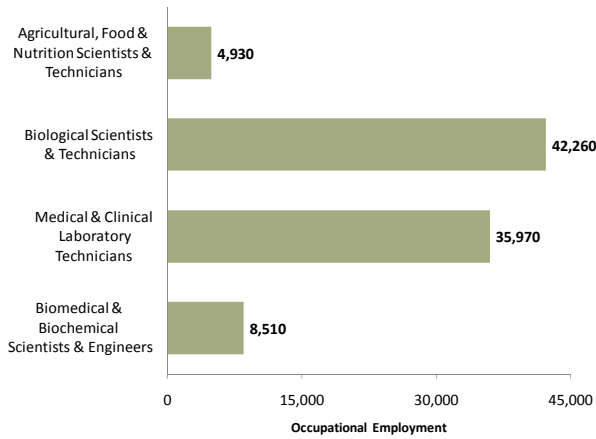


Clinical Trials by Major Disease Category in California, 2009

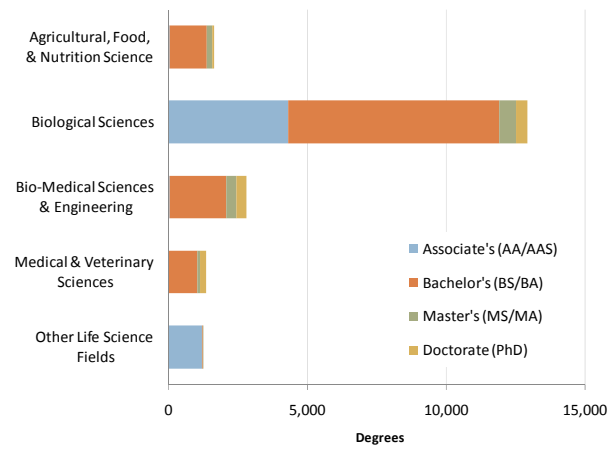


Bioscience Talent Base

Bioscience-related Occupational Employment in California, 2008

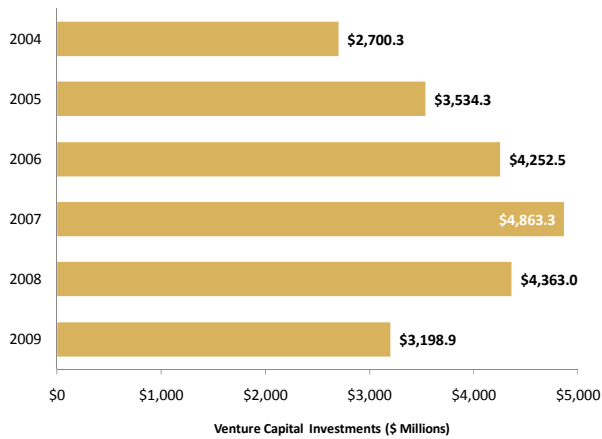


Bioscience-related Degrees in California, AY 2008

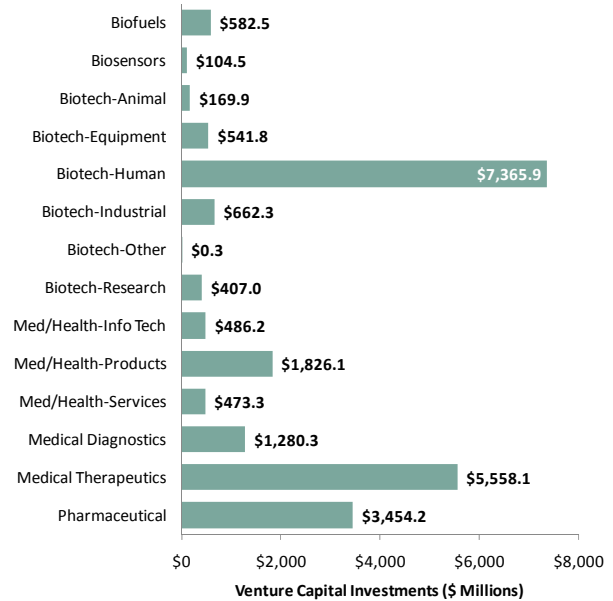


Bioscience Venture Capital

Bioscience-related Venture Capital Investments in California, 2004–2009

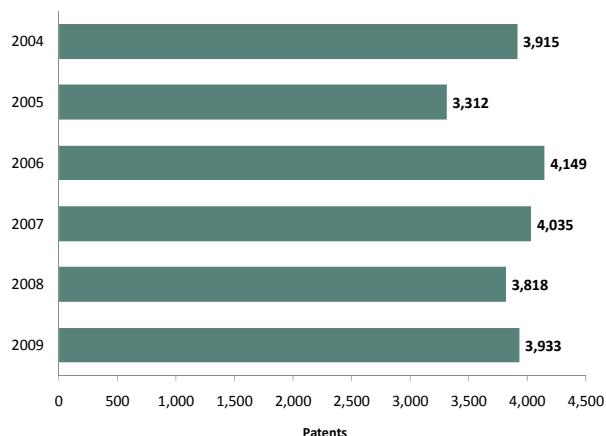


Bioscience-related Venture Capital Investments in California by Segment, 2004–2009

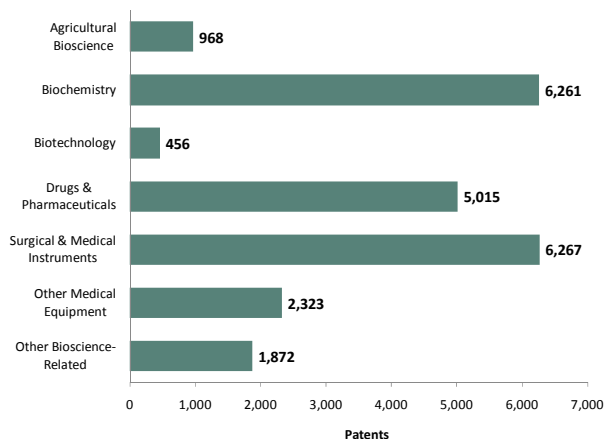


●●● Bioscience Patents

Bioscience-related Patents in California, 2004–2009



Bioscience-related Patents by Classification Group in California, 2004–2009



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Source Notes:

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW) industry data provided by the Minnesota IMPLAN Group, 2001 and 2008.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2006 (most currently available).

Academic R&D Expenditures: National Science Foundation (NSF) Survey of Research and Development Expenditures at Universities and Colleges, 2004 and 2008.

NIH Funding: National Institutes of Health, Office of Extramural Research, Award Trends, Dollars Awarded by State, 2004 and 2009.

Clinical Trials: National Institutes of Health, Clinicaltrials.gov, trials that were initiated in 2009.

Higher Education Degrees: National Center for Educational Statistics, Integrated Postsecondary Education Data System (IPEDS), 2008.

Occupational Employment: U.S. Bureau of Labor Statistics, Occupational Employment Statistics (OES) survey data, 2008.

Venture Capital: Thomson Reuters' VentureXpert Database, 2004–2009, as of January 15, 2010.

Patents: U.S. Patent & Trademark Office data as available from the Thomson Reuters' Delphion Patent Analysis Database, 2004–2009, as of January 15, 2010.

For a more detailed discussion of the data and methodology used, please see the Appendix to the full national report. ©2010