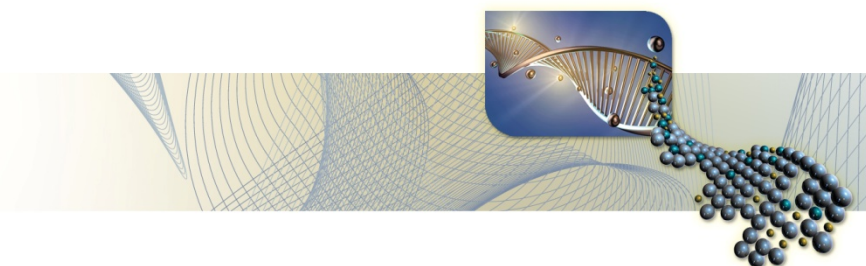


HAWAII



In Hawaii the research, testing and medical laboratories subsector is specialized in its employment concentration (location quotient of 1.29) and has grown at a faster rate than the national subsector, increasing by 71 percent during the seven years ending in 2008. Academic research expenditures in the biosciences were \$106 million in 2008, primarily in the medical sciences. The \$50 million in bioscience venture capital investments made during the last six years was mainly in medical diagnostics, followed by pharmaceuticals, and hit a peak in 2006. The 166 patents issued in the same period were led by drugs and pharmaceuticals, surgical and medical instruments, and biochemistry.

●●● Bioscience Performance Metrics

Summary of State Performance in Selected Bioscience-related Metrics

Metrics	Hawaii	United States	Rank*
Bioscience Industry, 2008			
Total Bioscience Industry Employment, 2008	3,584	1,420,324	V
Bioscience Industry Location Quotient, 2008	0.57	n/a	IV
Biosciences Industry Establishments, 2008	157	47,593	V
Academic R&D Expenditures, FY 2008			
Bioscience R&D (\$ thousands)	\$105,641	\$31,818,810	42
Bioscience Share of Total R&D	37.9%	61.3%	48
Bioscience R&D Per Capita	\$82.05	\$104.54	33
Change in Bioscience R&D, FY 2004–08	3.1%	22.3%	46
NIH Funding, FY 2009			
Total, Including ARRA Funds (\$ thousands)	\$68,268	\$25,837,590	41
Per Capita Funding	\$52.71	\$84.16	28
Change in Baseline Funding, FY 2004–09**	-29.0%	-4.7%	51
Change in Total Funding, FY 2004–09	-8.1%	14.6%	48
Clinical Trials, Initiated 2009	64	5,299	48
Higher Education Degrees in Bioscience Fields, AY 2008	431	161,811	50
Employment in Bioscience-related Occupations, 2008	3,330	717,510	38
Bioscience Venture Capital Investments, 2004–09 (\$ millions)	\$50.0	\$60,099	37
Bioscience and Related Patents, 2004–09	166	75,593	43

*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.

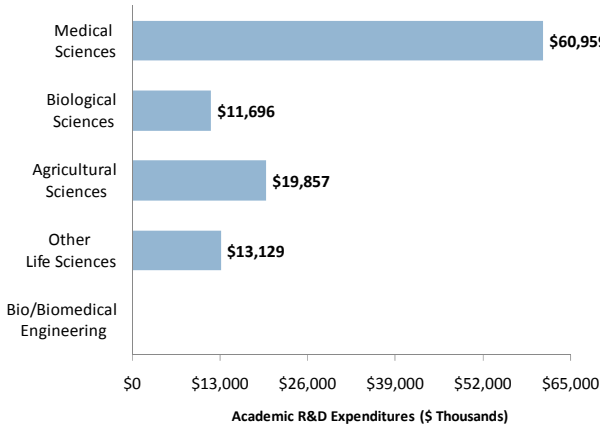
●●● Bioscience Industry Base, 2008

INDUSTRY SUBSECTOR	Hawaii		United States	
	2008	2001-08 Change	2008	2001-08 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS				
Establishments	7	-41.5%	2,440	16.0%
Employment	99	-70.2%	114,793	1.9%
Location Quotient	0.20		n/a	
Direct-Effect Employment Multiplier	2.76		11.33	
Total Employment Impact	273		1,284,650	
Average Annual Wage	\$39,447		\$72,279	
DRUGS & PHARMACEUTICALS				
Establishments	4	-20.0%	2,771	6.4%
Employment	48	-39.6%	311,882	2.3%
Location Quotient	0.04		n/a	
Direct-Effect Employment Multiplier	3.98		9.92	
Total Employment Impact	192		2,873,278	
Average Annual Wage	\$56,863		\$93,378	
MEDICAL DEVICES & EQUIPMENT				
Establishments	44	-10.3%	15,227	0.4%
Employment	287	-43.8%	435,509	2.0%
Location Quotient	0.15		n/a	
Direct-Effect Employment Multiplier	1.87		4.87	
Total Employment Impact	536		2,029,581	
Average Annual Wage	\$39,695		\$63,606	
RESEARCH, TESTING, & MEDICAL LABORATORIES				
Establishments	102	44.1%	27,154	57.7%
Employment	3,150	71.0%	558,140	46.1%
Location Quotient	1.29		n/a	
Direct-Effect Employment Multiplier	2.21		3.30	
Total Employment Impact	6,973		1,853,127	
Average Annual Wage	\$56,930		\$80,785	
TOTAL BIOSCIENCES INDUSTRY				
Establishments	157	14.7%	47,593	28.3%
Employment	3,584	29.6%	1,420,324	15.8%
Location Quotient	0.57		n/a	
Direct-Effect Employment Multiplier	2.23		5.82	
Total Employment Impact	7,974		8,040,636	
Average Annual Wage	\$55,067		\$77,595	
TOTAL PRIVATE SECTOR				
Establishments	36,618	7.5%	8,860,956	13.8%
Employment	506,917	13.6%	113,917,377	3.5%
Average Annual Wage	\$37,436		\$45,229	

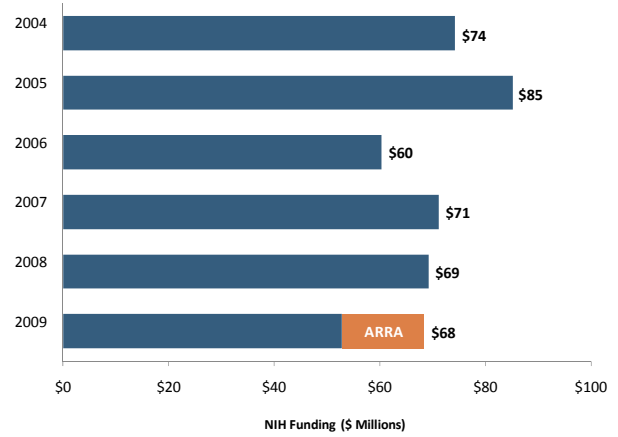
Note: U.S. employment metrics include Puerto Rico. Estimates of total employment impacts do not include Puerto Rico.

●●● Bioscience Performance Metrics

Bioscience Academic R&D Expenditures in Hawaii, FY 2008

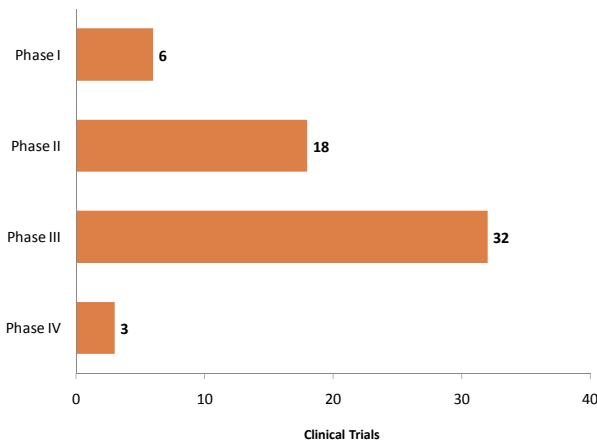


NIH Awards in Hawaii, 2004–2009

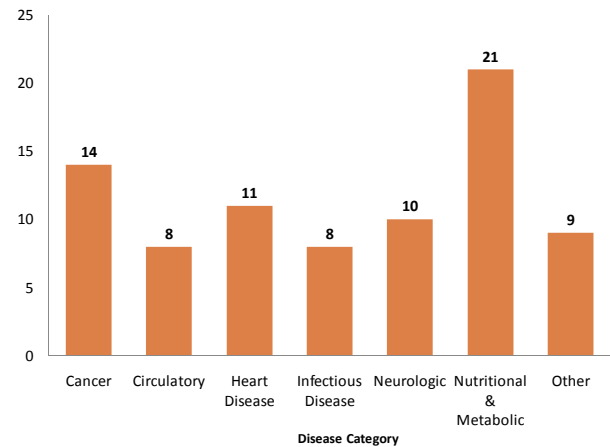


●●● Recent Clinical Trial Activities

Clinical Trials by Phase in Hawaii, 2009

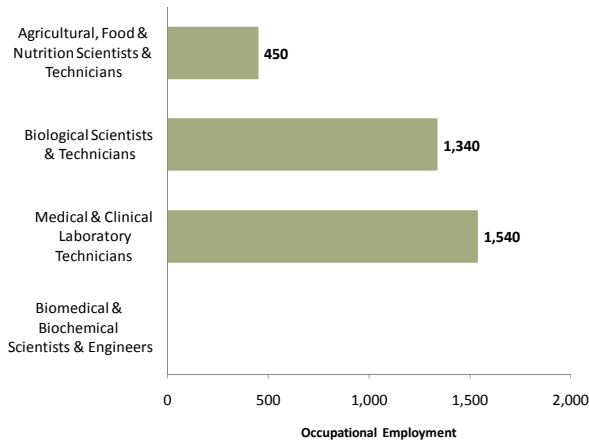


Clinical Trials by Major Disease Category in Hawaii, 2009

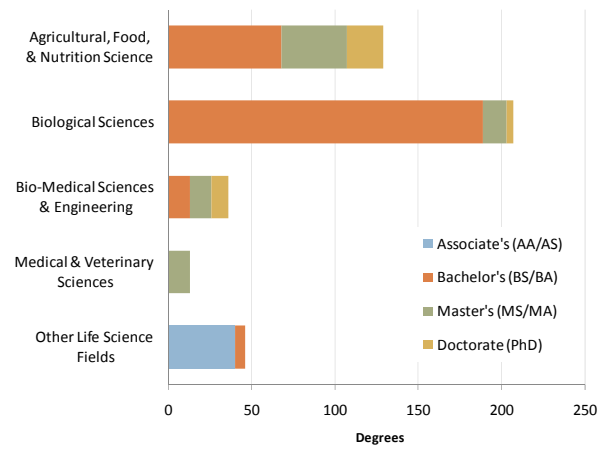


Bioscience Talent Base

Bioscience-related Occupational Employment in Hawaii, 2008

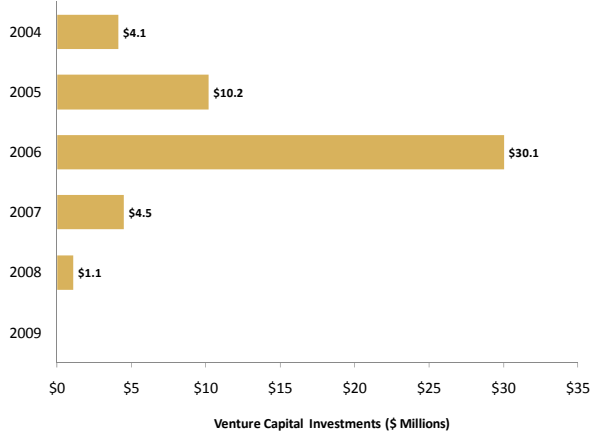


Bioscience-related Degrees in Hawaii, AY 2008

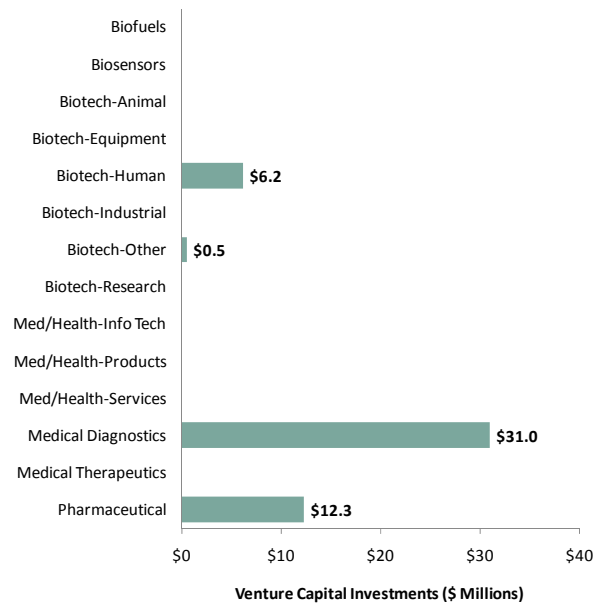


Bioscience Venture Capital

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

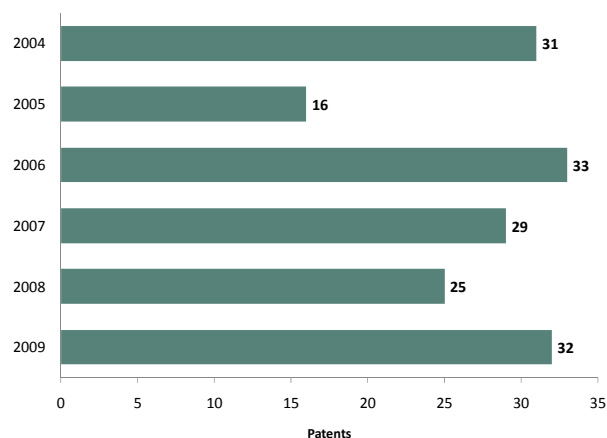


Bioscience-related Venture Capital Investments in Hawaii by Segment, 2004–2009

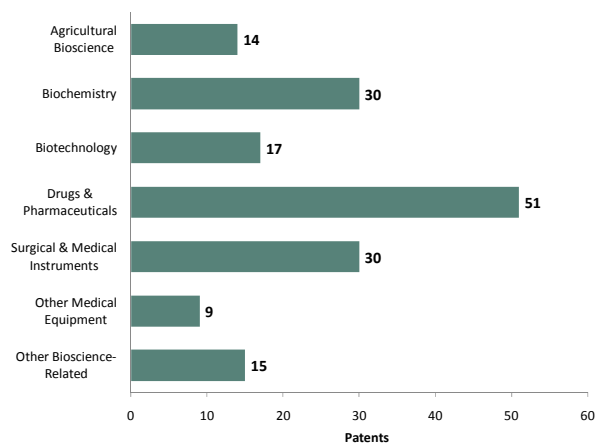


●●● Bioscience Patents

Bioscience-related Patents in Hawaii, 2004–2009



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



State Bioscience Contact

Hawaii Science and Technology Council

733 Bishop Street, Suite 1800

Honolulu, HI 96813

P: (808) 536-4670

F: (808) 536-4680

www.hiscitech.org

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