

Iowa has a highly concentrated and rapidly growing bioscience industry. Iowa has nearly 7 percent of national employment, faster growth than the national average, and a highly specialized concentration in the agricultural feedstock and chemicals subsector (location quotient of 5.99). The remaining three subsectors—drugs and pharmaceuticals, medical devices and equipment, and research, testing and medical laboratories—also grew faster than the national rate in the seven years ending in 2008. Academic bioscience research expenditures totaled \$351 million in 2008, with the majority of R&D in the medical sciences. Among State bioscience companies receiving a total of \$279 million in venture capital funding during the past six years, the majority have gone to firms in biofuels. The 1,365 patents granted in the last six years were very heavily concentrated in biotechnology.

●●● Bioscience Performance Metrics

Summary of State Performance in Selected Bioscience-related Metrics

Metrics	Iowa	United States	Rank*
Bioscience Industry, 2008			
Total Bioscience Industry Employment, 2008	16,574	1,420,324	III
Bioscience Industry Location Quotient, 2008	1.06	n/a	II
Biosciences Industry Establishments, 2008	525	47,593	III
Academic R&D Expenditures, FY 2008			
Bioscience R&D (\$ thousands)	\$350,804	\$31,818,810	28
Bioscience Share of Total R&D	66.5%	61.3%	16
Bioscience R&D Per Capita	\$117.17	\$104.54	16
Change in Bioscience R&D, FY 2004–08	-1.6%	22.3%	48
NIH Funding, FY 2009			
Total, Including ARRA Funds (\$ thousands)	\$230,236	\$25,837,590	25
Per Capita Funding	\$76.54	\$84.16	18
Change in Baseline Funding, FY 2004–09**	-1.6%	-4.7%	26
Change in Total Funding, FY 2004–09	17.2%	14.6%	28
Clinical Trials, Initiated 2009	174	5,299	35
Higher Education Degrees in Bioscience Fields, AY 2008	2,085	161,811	25
Employment in Bioscience-related Occupations, 2008	8,960	717,510	26
Bioscience Venture Capital Investments, 2004–09 (\$ millions)	\$278.6	\$60,099	25
Bioscience and Related Patents, 2004–09	1,365	75,593	21

*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.

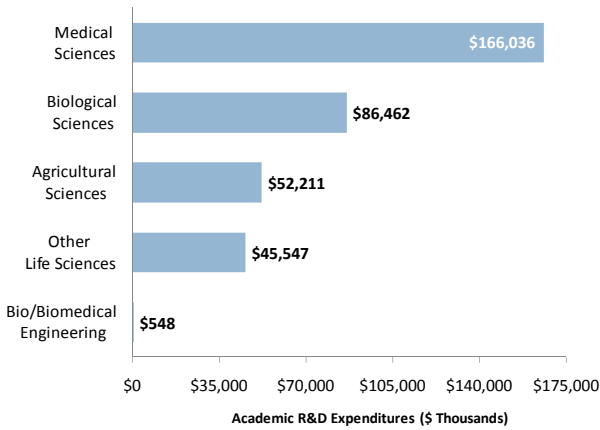
●●● Bioscience Industry Base, 2008

INDUSTRY SUBSECTOR	Iowa		United States	
	2008	2001-08 Change	2008	2001-08 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS				
Establishments	144	43.4%	2,440	16.0%
Employment	7,568	31.3%	114,793	1.9%
Location Quotient	5.99		n/a	
Direct-Effect Employment Multiplier	7.23		11.33	
Total Employment Impact	54,717		1,284,650	
Average Annual Wage	\$68,065		\$72,279	
DRUGS & PHARMACEUTICALS				
Establishments	42	0.0%	2,771	6.4%
Employment	2,793	16.6%	311,882	2.3%
Location Quotient	0.81		n/a	
Direct-Effect Employment Multiplier	4.16		9.92	
Total Employment Impact	11,610		2,873,278	
Average Annual Wage	\$56,288		\$93,378	
MEDICAL DEVICES & EQUIPMENT				
Establishments	137	-0.3%	15,227	0.4%
Employment	3,965	106.2%	435,509	2.0%
Location Quotient	0.83		n/a	
Direct-Effect Employment Multiplier	2.11		4.87	
Total Employment Impact	8,381		2,029,581	
Average Annual Wage	\$58,198		\$63,606	
RESEARCH, TESTING, & MEDICAL LABORATORIES				
Establishments	202	21.4%	27,154	57.7%
Employment	2,248	61.7%	558,140	46.1%
Location Quotient	0.37		n/a	
Direct-Effect Employment Multiplier	2.00		3.30	
Total Employment Impact	4,496		1,853,127	
Average Annual Wage	\$55,678		\$80,785	
TOTAL BIOSCIENCES INDUSTRY				
Establishments	525	17.6%	47,593	28.3%
Employment	16,574	44.5%	1,420,324	15.8%
Location Quotient	1.06		n/a	
Direct-Effect Employment Multiplier	4.78		5.82	
Total Employment Impact	79,204		8,040,636	
Average Annual Wage	\$62,040		\$77,595	
TOTAL PRIVATE SECTOR				
Establishments	88,134	3.2%	8,860,956	13.8%
Employment	1,254,655	4.4%	113,917,377	3.5%
Average Annual Wage	\$36,359		\$45,229	

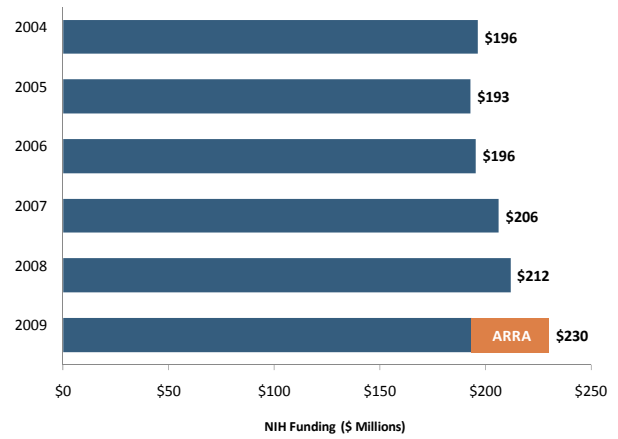
Note: U.S. employment metrics include Puerto Rico. Estimates of total employment impacts do not include Puerto Rico.

●●● Bioscience Performance Metrics

Bioscience Academic R&D Expenditures in Iowa, FY 2008

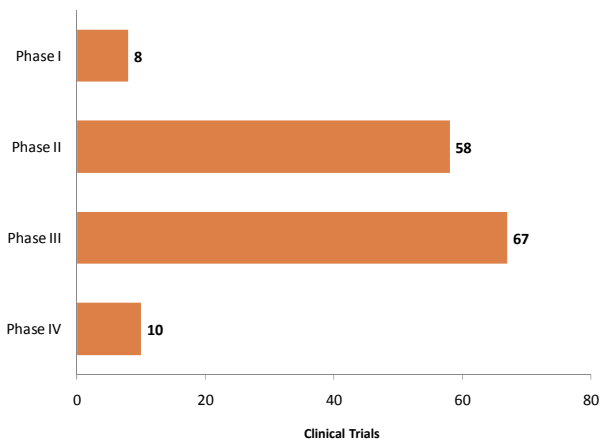


NIH Awards in Iowa, 2004–2009

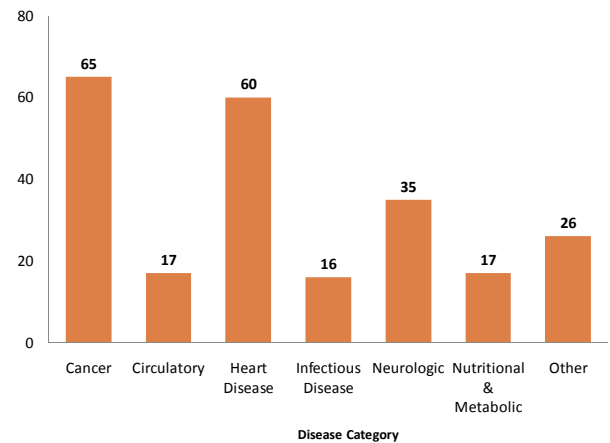


●●● Recent Clinical Trial Activities

Clinical Trials by Phase in Iowa, 2009

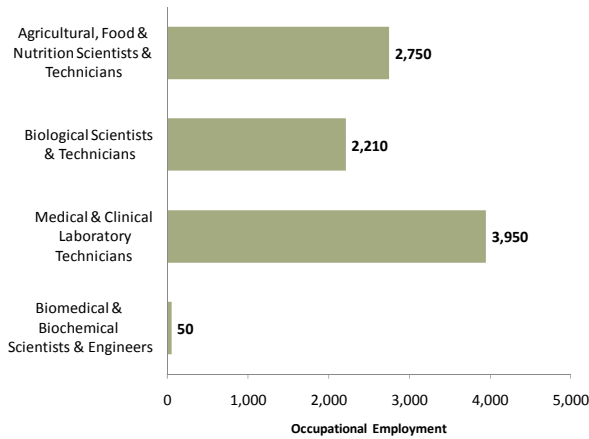


Clinical Trials by Major Disease Category in Iowa, 2009

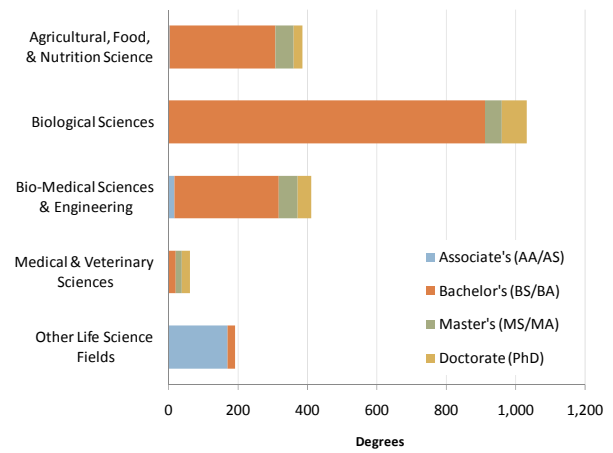


Bioscience Talent Base

Bioscience-related Occupational Employment in Iowa, 2008

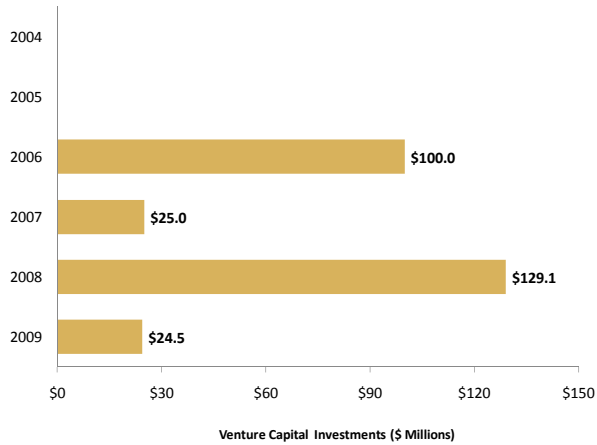


Bioscience-related Degrees in Iowa, AY 2008

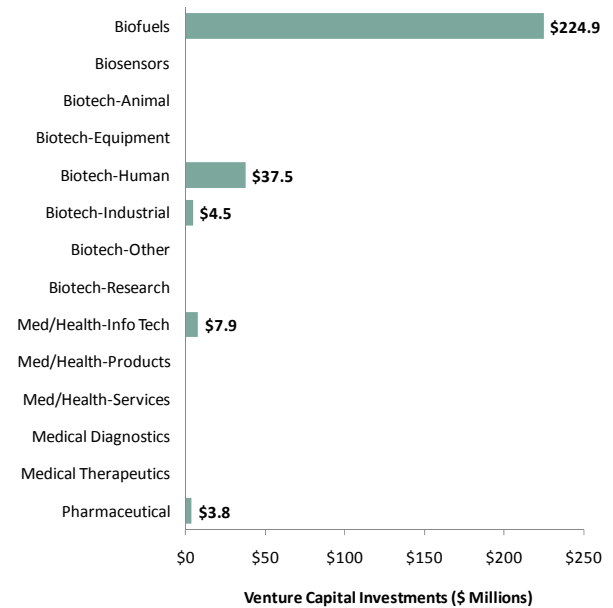


Bioscience Venture Capital

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

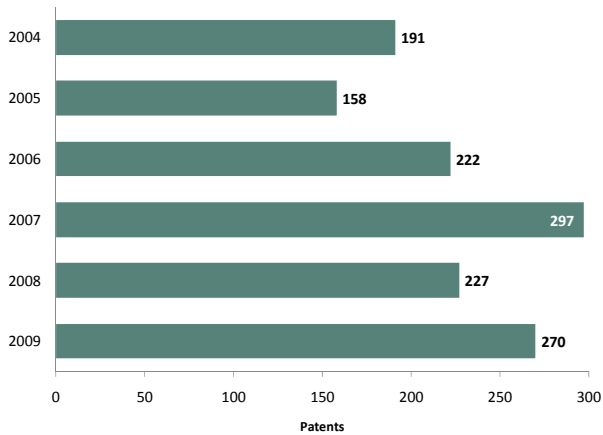


Bioscience-related Venture Capital Investments in Iowa by Segment, 2004–2009

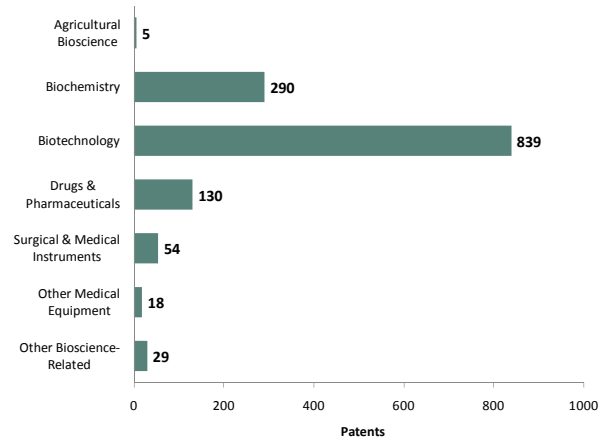


●●● Bioscience Patents

Bioscience-related Patents in Iowa, 2004–2009



Bioscience-related Patents by Classification Group in Iowa, 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