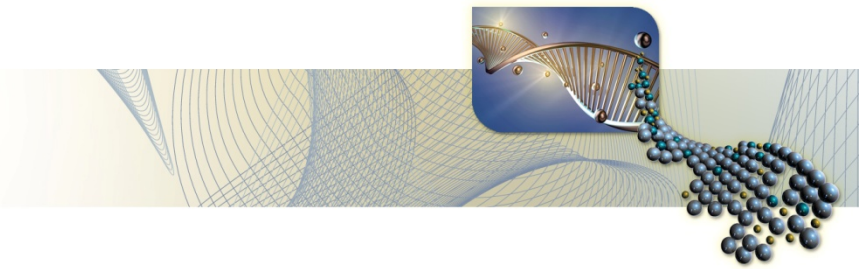


OKLAHOMA



The largest bioscience industry subsector in Oklahoma is research, testing and medical laboratories (3,420 jobs). Total academic bioscience research and development expenditures in 2008 were \$188 million, led by biological sciences (\$73 million), medical sciences (\$68 million) and agricultural sciences (\$42 million). Oklahoma has seen its academic R&D in the biosciences increase at a slightly higher rate than the nation since 2004. The State's biomedical institutions participated in 267 active clinical trials in 2009. Oklahoma higher education institutions contribute to the bioscience industry, producing more than 2,000 degree graduates in bioscience-related fields in 2008. Of \$15.9 million in venture capital invested in Oklahoma bioscience companies the last six years, all went to companies in medical diagnostics and human biotechnology. Of 300 bioscience patents issued over the same six-year period, the largest share was in biochemistry, followed by drugs and pharmaceuticals and surgical and medical instruments.

●●● Bioscience Performance Metrics

Summary of State Performance in Selected Bioscience-related Metrics

Metrics	Oklahoma	United States	Rank*
Bioscience Industry, 2008			
Total Bioscience Industry Employment, 2008	5,764	1,420,324	IV
Bioscience Industry Location Quotient, 2008	0.37	n/a	V
Biosciences Industry Establishments, 2008	543	47,593	III
Academic R&D Expenditures, FY 2008			
Bioscience R&D (\$ thousands)	\$188,308	\$31,818,810	36
Bioscience Share of Total R&D	56.5%	61.3%	31
Bioscience R&D Per Capita	\$51.68	\$104.54	44
Change in Bioscience R&D, FY 2004–08	23.3%	22.3%	19
NIH Funding, FY 2009			
Total, Including ARRA Funds (\$ thousands)	\$97,022	\$25,837,590	37
Per Capita Funding	\$26.31	\$84.16	42
Change in Baseline Funding, FY 2004–09**	-13.8%	-4.7%	44
Change in Total Funding, FY 2004–09	10.4%	14.6%	40
Clinical Trials, Initiated 2009	267	5,299	30
Higher Education Degrees in Bioscience Fields, AY 2008	2,073	161,811	26
Employment in Bioscience-related Occupations, 2008	5,270	717,510	32
Bioscience Venture Capital Investments, 2004–09 (\$ millions)	\$15.9	\$60,099	45
Bioscience and Related Patents, 2004–09	300	75,593	36

*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.

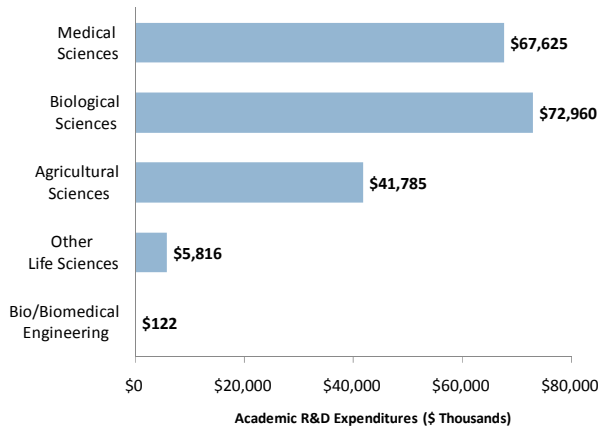
●●● Bioscience Industry Base, 2008

INDUSTRY SUBSECTOR	Oklahoma		United States	
	2008	2001-08 Change	2008	2001-08 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS				
Establishments	25	25.4%	2,440	16.0%
Employment	647	-33.8%	114,793	1.9%
Location Quotient	0.52		n/a	
Direct-Effect Employment Multiplier	7.50		11.33	
Total Employment Impact	4,850		1,284,650	
Average Annual Wage	\$65,704		\$72,279	
DRUGS & PHARMACEUTICALS				
Establishments	18	-21.7%	2,771	6.4%
Employment	179	-61.3%	311,882	2.3%
Location Quotient	0.05		n/a	
Direct-Effect Employment Multiplier	5.52		9.92	
Total Employment Impact	987		2,873,278	
Average Annual Wage	\$57,648		\$93,378	
MEDICAL DEVICES & EQUIPMENT				
Establishments	169	7.2%	15,227	0.4%
Employment	1,518	-0.4%	435,509	2.0%
Location Quotient	0.32		n/a	
Direct-Effect Employment Multiplier	2.64		4.87	
Total Employment Impact	4,002		2,029,581	
Average Annual Wage	\$45,249		\$63,606	
RESEARCH, TESTING, & MEDICAL LABORATORIES				
Establishments	331	86.3%	27,154	57.7%
Employment	3,420	20.2%	558,140	46.1%
Location Quotient	0.56		n/a	
Direct-Effect Employment Multiplier	2.21		3.30	
Total Employment Impact	7,574		1,853,127	
Average Annual Wage	\$52,201		\$80,785	
TOTAL BIOSCIENCES INDUSTRY				
Establishments	543	43.5%	47,593	28.3%
Employment	5,764	-0.8%	1,420,324	15.8%
Location Quotient	0.37		n/a	
Direct-Effect Employment Multiplier	3.02		5.82	
Total Employment Impact	17,413		8,040,636	
Average Annual Wage	\$52,055		\$77,595	
TOTAL PRIVATE SECTOR				
Establishments	95,253	11.7%	8,860,956	13.8%
Employment	1,239,995	6.0%	113,917,377	3.5%
Average Annual Wage	\$37,126		\$45,229	

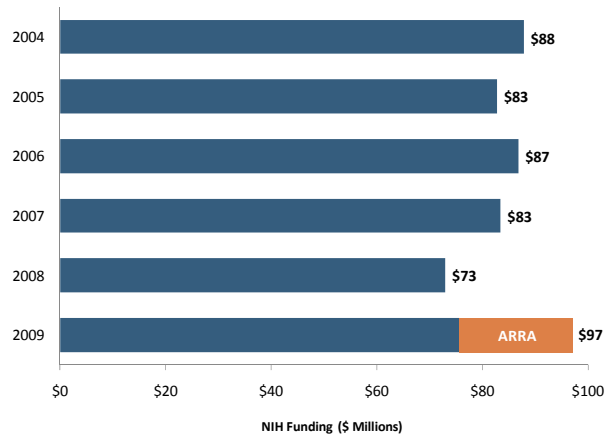
Note: U.S. employment metrics include Puerto Rico. Estimates of total employment impacts do not include Puerto Rico.

●●● Bioscience Performance Metrics

Bioscience Academic R&D Expenditures in Oklahoma, FY 2008

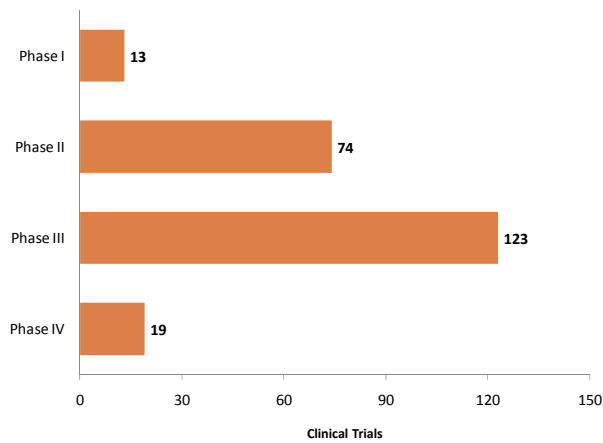


NIH Awards in Oklahoma, 2004–2009

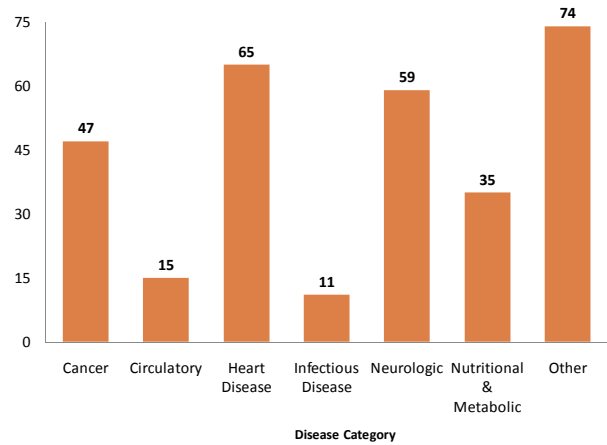


●●● Recent Clinical Trial Activities

Clinical Trials by Phase in Oklahoma, 2009

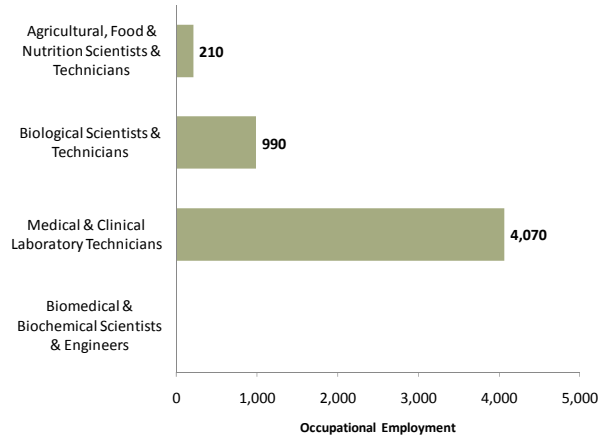


Clinical Trials by Major Disease Category in Oklahoma, 2009

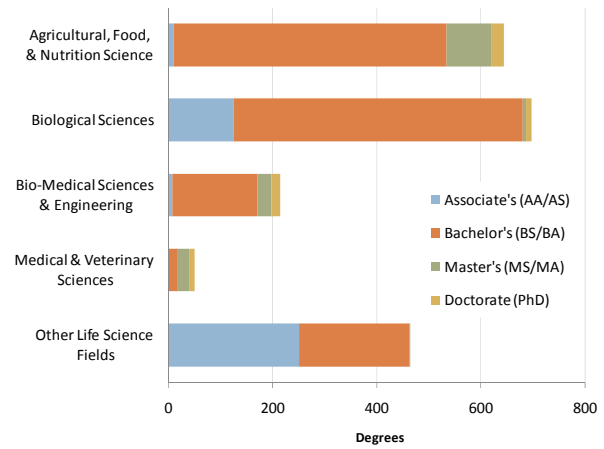


Bioscience Talent Base

Bioscience-related Occupational Employment in Oklahoma, 2008

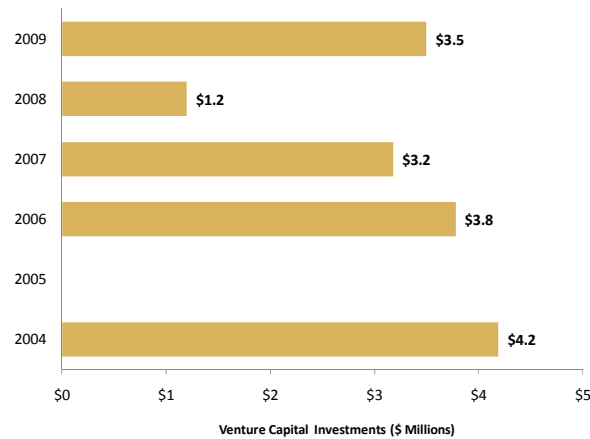


Bioscience-related Degrees in Oklahoma, AY 2008

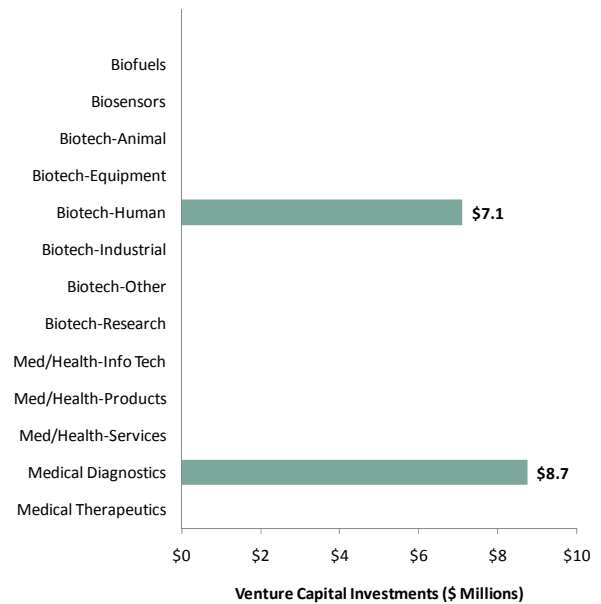


Bioscience Venture Capital

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

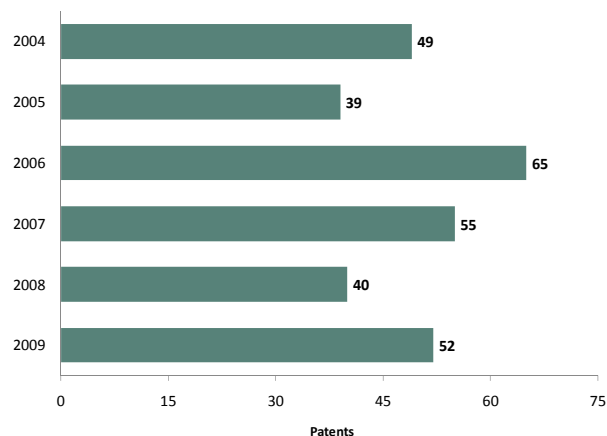


Bioscience-related Venture Capital Investments in Oklahoma by Segment, 2004–2009

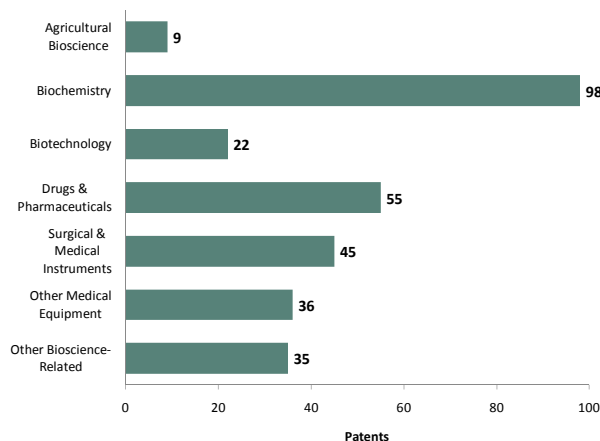


●●● Bioscience Patents

Bioscience-related Patents in Oklahoma, 2004–2009



Bioscience-related Patents by Classification Group in Oklahoma, 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