



# Missouri Target Industry Brief BIOSCIENCES

## Biosciences Industry

The **Biosciences** Target Industry Group represents 13 industries and 2.4 percent of total private sector employment. **Biosciences** industries employed 56,083 workers across 4,898 establishments. The 2017 average annual wage was about \$59,400— this is nearly \$11,600 more than the state’s private sector average annual wage of \$47,800. Missouri’s **Bioscience** industry has a niche in Plant and Agricultural Technology, Companion and Feed Animal Sciences, and Biomedicine.

**Biosciences** research and development efforts in the state are supported by a network of public and private entities, among them are Donald Danforth Plant Science Center, the University of Missouri’s Agricultural Research Centers, Stowers Institute, Bayer CropScience, Monsanto, Nestlé Purina, and Teva Pharmaceuticals.

The Location Quotient (LQ) compares the regional share of an industry to the national share so that a LQ over 1.0 indicates sectors of employment concentration. Missouri has particularly high employment concentrations in *Animal Food Manufacturing* with a LQ of 4.13, *Hog and Pig Farming* with a LQ of 3.18, *Agricultural Chemical Manufacturing* with a LQ of 2.59, and *Oilseed and Grain Farming* with a LQ of 2.20.

**2017 Employment and Establishment Data for the Bioscience Target Industry Group**

NAICS	Industry	2017 Establishments	2017 Employment	2017 Average Annual Wage	2017 Employment Location Quotient
	<b>Total All Private Industry</b>	<b>196,379</b>	<b>2,367,217</b>	<b>\$47,810</b>	
1111	Oilseed and Grain Farming	578	2,346	\$37,875	2.20
1122	Hog and Pig Farming	93	2,029	\$35,902	3.18
1152	Support Activities for Animal Production	84	602	\$31,346	1.04
3111	Animal Food Manufacturing	88	4,813	\$89,542	4.13
3112	Grain and Oilseed Milling	38	2,086	\$50,920	1.76
3251	Basic Chemical Manufacturing	55	3,417	\$67,887	1.19
3253	Agricultural Chemical Manufacturing	44	1,788	\$73,712	2.59
3254	Pharmaceutical and Medicine Manufacturing	82	5,845	\$85,713	1.03
3391	Medical Equipment and Supplies Manufacturing	215	3,733	\$51,350	0.63
4245	Farm Product Raw Material Merchandise Whls	182	2,205	\$48,300	1.58
5417	Scientific Research and Development Services	452	8,637	\$98,014	0.68
5419	Other Professional and Technical Services	2,682	15,000	\$43,644	1.10
6215	Medical and Diagnostic Laboratories	305	3,582	\$57,669	0.69
	<b>Total Bioscience Industries</b>	<b>4,898</b>	<b>56,083</b>	<b>\$59,375</b>	<b>1.68</b>

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2017 Annual Data

# Bioscience Employment Trends

## Employment Trends: 2012 - 2017

Employment in the **Biosciences** Target Industry Group grew an average 1.8 percent per year from 2012 to 2017. There was significant increases in *Other Professional and Technical Services*, which increased at 6.9 percent, *Animal Food Manufacturing* at 4.6 percent increase, *Pharmaceutical and Medicine Manufacturing* at 3.0 percent increase, and *Hog and Pig Farming* at 2.9 percent increase.

The largest **Bioscience** industries are *Other Professional and Technical Services*, *Scientific Research and Development Services*, and *Pharmaceutical and Medicine Manufacturing*. The *Other Professional and Technical Services* industry employed 15,000 persons – over a quarter of these workers were in that industry’s *Veterinary Services* sector. The *Scientific Research and Development Services* industry had 8,637 employees with many working in the biotechnology, physical and engineering science, and social science sectors.

Ten **Bioscience** industries posted net employment gains. *Other Professional and Technical Services* industry had the largest gain with 4,265 jobs between 2012 and 2017; *Animal Food Manufacturing* had a gain of 976 jobs followed by *Pharmaceutical and Medicine Manufacturing* with 793 jobs.

Three **Bioscience** industries posted a net loss. *Medical and Diagnostic Laboratories* lost 381 jobs, *Grain and Oil Seed Milling* lost 478 jobs, and *Scientific Research and Development Services* shows a loss of 1,394 jobs, largely due to a reclassification issue.

2012 - 2017 Employment Data BioScience Target Industry Group

NAICS	Industry	2012 Employment	2013 Employment	2014 Employment	2015 Employment	2016 Employment	2017 Employment	2012 -2017 Employment Change
1111	Oilseed and Grain Farming	2,206	2,381	2,431	2,444	2,493	2,346	140
1122	Hog and Pig Farming	1,761	1,834	1,779	1,939	2,016	2,029	268
1152	Support Activities for Animal Production	575	576	599	613	624	602	27
3111	Animal Food Manufacturing	3,837	3,934	3,956	4,368	4,712	4,813	976
3112	Grain and Oilseed Milling	2,564	2,240	2,247	2,231	2,191	2,086	-478
3251	Basic Chemical Manufacturing	3,149	2,959	3,270	3,286	3,331	3,417	268
3253	Agricultural Chemical Manufacturing	1,693	1,708	1,716	1,659	1,717	1,788	95
3254	Pharmaceutical and Medicine Manufacturing	5,052	5,472	5,292	5,202	5,600	5,845	793
3391	Medical Equipment and Supplies Manufacturing	3,434	3,391	3,462	3,469	3,606	3,733	299
4245	Farm Product Raw Material Mechandise Whls	2,201	2,147	2,245	2,326	2,246	2,205	4
5417	Scientific Research and Development Services	10,031	6,742	7,183	7,944	8,479	8,637	-1,394
5419	Other Professional and Technical Services	10,735	11,162	11,732	12,701	13,886	15,000	4,265
6215	Medical and Diagnostic Laboratories	3,963	3,850	3,802	3,809	3,716	3,582	-381
<b>Total</b>		<b>51,201</b>	<b>48,396</b>	<b>49,714</b>	<b>51,991</b>	<b>54,617</b>	<b>56,083</b>	<b>4,882</b>

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages, Annual Data

# Bioscience Occupations

## Bioscience Occupations

Occupations in the **Bioscience** Industry typically require some combination of training (i.e., education, experience, or on-the-job). The top employing occupations that require long-term (Later) training include *Veterinarians, Market Research Analysts and Marketing Specialists*, and *General and Operations Managers*. Occupations requiring moderate (Next) training include *Veterinary Technologists and Technicians, First-Line Supervisors of Production and Operating Workers*, and *Phlebotomists*. Leading occupations requiring short-term (Now) training include *Veterinary Assistants and Laboratory Animal Caretakers, Secretaries and Administrative Assistants*, and *Packaging and Filling Machine Operators and Tenders*.

Persons employed as *General and Operations Managers* earned nearly \$111,100 annual average, followed by *Veterinarians* who earned an average \$97,400.

2017 Top Occupations in Biosciences

Now Next Later	Occupation Code	Occupation Title	2017 Estimated Employment	2017 Average Wages
NOW	31-9096	Veterinary Assistants and Laboratory Animal Caretakers	1,660	\$24,033
NOW	43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	1,470	\$33,695
NOW	51-9111	Packaging and Filling Machine Operators and Tenders	1,370	\$33,528
NOW	51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	1,220	\$43,524
NOW	53-7062	Laborers and Freight, Stock, and Material Movers	1,190	\$27,119
NEXT	29-2056	Veterinary Technologists and Technicians	1,520	\$34,673
NEXT	51-1011	First-Line Supervisors of Production and Operating Workers	950	\$65,138
NEXT	31-9097	Phlebotomists	810	\$33,730
NEXT	43-3031	Bookkeeping, Accounting, and Auditing Clerks	530	\$37,759
NEXT	53-3032	Heavy and Tractor-Trailer Truck Drivers	430	\$41,987
LATER	29-1131	Veterinarians	1,460	\$97,403
LATER	13-1161	Market Research Analysts and Marketing Specialists	1,040	\$65,820
LATER	11-1021	General and Operations Managers	970	\$111,089
LATER	19-2031	Chemists	510	\$69,568
LATER	13-2011	Accountants and Auditors	450	\$95,233

Source: Division of Occupational Employment Statistics  
U.S. Bureau of Labor Statistics

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