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STATE BIOSCIENCE INDUSTRY DEVELOPMENT 2012

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Bio Biotechnology Industry Organization

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BIO—Biotechnology Industry Organization—represents more than 1,100 biotechnology companies, academic institutions, state biotechnology centers and related organizations across the United States and in more than 30 other nations. BIO members are involved in the research and development of innovative healthcare, agricultural, industrial and environmental biotechnology products. BIO also produces the BIO International Convention, the world's largest gathering of the biotechnology industry, along with industry-leading investor and partnering meetings held around the world. BIO produces BIOtechNOW, a multiblog platform and monthly newsletter that aims to create an online biotech community where the the industry can connect to discuss the latest news.

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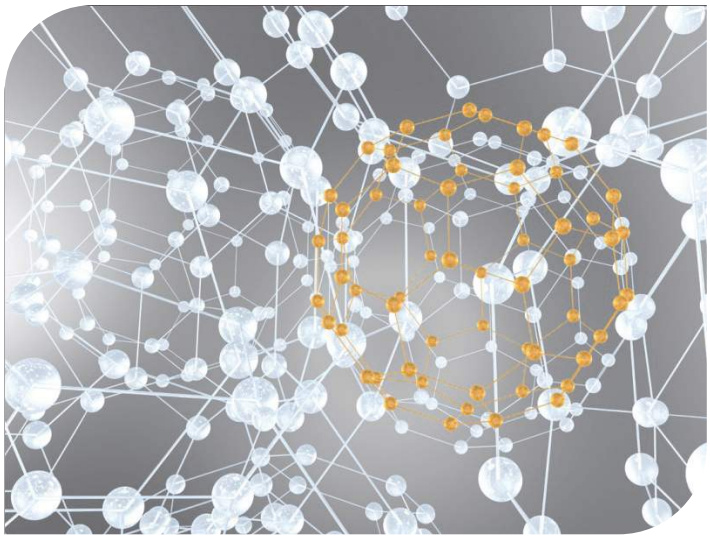
CONTENTS



Executive Summary

At a time when the global economy struggles to recover from a severe recession and uncertainty remains regarding future economic growth, bioscience industry development is generating significant attention both globally and at home. A number of recent studies have detailed the mounting global competition for bioscience industry development as both developed and developing nations seek to grow and advance in this high-wage, high-growth industry.[1] This April, the U.S. government released the *National Bioeconomy Blueprint* noting that bioscience industries are "a large and rapidly growing segment of the world economy that provides substantial public benefit."[2]

Indeed, the bioscience industry stands out in job growth. While not immune from the global recession, the bioscience industry has demonstrated that it is a generally strong and steady job generator, growing jobs over the past decade at a pace well above the national average. It also has fared much better than the overall economy through the recent U.S. recession and into the first year of the recovery. When compared with other major knowledge economy industries, which are critical for advancing high quality jobs, the bioscience industry has led in job creation during the 2001 to 2010 period (see key findings below).

A primary reason for the resiliency of the bioscience industry is the diverse set of markets it serves. These markets span: biomedical drugs; diagnostics and devices; agricultural products from animal health to seeds and crop protection; and bio-based industrial products such as enzymes for industry chemical processes and bio-remediation, bio-fuels, and bio-plastics. In addition, the bioscience industry involves not only high value, export-oriented manufacturing activities, but encompasses specialty commercial research, development and testing industries to advance bioscience product development as well as specialty distribution to bring bioscience products to market.

Another factor spurring the attractiveness of bioscience industry development is how closely its growth is shaped by the fast pace of advances in biological sciences, making it truly one of the most innovative industries today. The close connections between basic research discoveries, often advanced in academic and federal laboratory settings, and industry product development within the biosciences are well-documented—setting bioscience industry development apart from many other leading technology areas.[3]

Significant levels of research and development in bioscience industries continuously drive innovation and new product development. A recent report by the U.S. Department of Commerce, published jointly through its Patent and Trademark Office and Economics and Statistics Administration, found that

[1] See ITIF and United for Medical Research, Leadership in Decline: Assessing U.S. International Competitiveness in Biomedical Research, May 2012 and Battelle, The Biopharmaceutical Research and Development Enterprise: Growth Platform for Economies Around the World, May 2012.

[2] Obama Administration, National Bioeconomy Blueprint, April 2012, page 1.

[3] An extensive study in the late 1990s found that 31 percent of new drugs and medical products would not have been developed (or would have been substantially delayed) in the absence of academic research, more than twice the rate found for all technology industries (see Edwin Mansfield, "Academic Research and Industrial Innovation," Research Policy, 1998, 26:773-776; A 2003 National Academy of Engineering report entitled The Impact of Academic Research on Industrial Performance found that "one of the defining characteristics of the medical devices and equipment sector is a strong dependency between universities and industry…Academic research has had a substantial impact on the industry's performance…including a high degree of involvement in product development, product evaluation and introduction, and product modification." Advances in basic biosciences research are having similar transformative impacts on agriculture in improving and protecting plants as well as in industrial biotechnology applications that are leading to bio-based fuels, chemicals and products.

bioscience industries are among those with the highest levels of patent intensity. The report also cites the results from an earlier study by Carnegie-Mellon that found the bioscience industry to be among the leading industries in which patent protection led to capturing competitive advantages in the market place.[4]

The message is clear—a strong bioscience industry base offers the United States of America, as well as each of the 50 states, Puerto Rico and the District of Columbia, a high value economic driver. It stands out in its creation of high quality jobs, the breadth of markets it serves, and its research and development intensity. An excellent example of how this all comes together is what has been accomplished with the human genome project in the U.S. This $10.4 billion investment in basic sciences during the 1993 to 2010 period drove $796 billion in economic impact, and created 3.8 million job-years of employment over this period.[5] Just as important, it launched the genomic revolution whose technologies, tools and basic biological knowledge have found applications across a wide range of economic activities beyond human healthcare, including agriculture and veterinary medicine as well as environmental remediation to biofuels and other industrial applications (see text box below for more details).

Human Genome Project: A Case Study of How Basic Research and Industry Development Come Together in the Biosciences

One tangible example of the close linkages between basic research discoveries and bioscience industry development is the results from the Human Genome Project. The U.S. government invested $3.8 billion in human genome sequencing programs during the 1988 to 2003 period, and has continued to invest in further genomics research with an additional $6.6 billion from 2004 to 2010. The decoding of the human genome was both a technological as well as scientific achievement. An industry has grown up to supply the scientific research community with the tools needed to conduct genomics research and development and associated product development, such as gene sequencers, sample preparation technologies, sample amplification technology, and a range of other analytical tools and technologies. Moreover, a majority of bioscience companies are now using genomics-based tools to advance new product development.

In a recent study, a database of individual companies engaged in genomics-related activities was developed ranging from new instruments and equipment, R&D, and testing services to bioinformatics and new product development. Altogether, this industry employed more than 44,000 in 2010 and over the 1993 to 2010 period generated 591,138 job years from those it employed.

Considering the full economic multipliers from the direct scientific research and industry-generated growth from the U.S. government's funding of the Human Genome Project, during the 1993 to 2010 period, finds that it has generated a total of 3.8 million job-years of employment or an additional 4.38 job years for every one direct job year. The overall economic activity was so substantial that the U.S. government reaped total tax revenues of $48.9 billion compared to the just slightly more than $10 billion it invested in human genome research from 1993 to 2010.

***Economic Impact of the Human Genome Project*, Prepared by Battelle Technology Partnership Practice with Support from the Life Technologies Foundation, May 2011**

[4] U.S. Department of Commerce, Intellectual Property and the U.S. Economy: Industries in Focus, March 2012

[5] A job year is the concept where, for example, 10 job years reflects one job created that lasts for 10 years or conversely where 10 jobs are created each lasting for one year.

Measuring Bioscience Industry Development: Keeping Pace with an Evolving Industry

Given the importance of the biosciences as an economic driver, BIO has worked with the Battelle Technology Partnership Practice in tracking the development of the U.S. bioscience industry on a state by state basis every two years since 2004. Examining both the national and unfolding state-by-state footprint of the bioscience industry offers an important perspective, particularly given that the national economy is built from the bottom up and that economic development is a shared national, state, and local responsibility.

Measuring the bioscience industry is not straight-forward. Instead of falling neatly into a single high level industry classification, the biosciences are best understood as a grouping of diverse industries with a common link—the application of biological scientific knowledge. Defining biosciences industries requires analyzing standard industrial classifications at the most detailed level to identify those involved in bioscience-related activities. These bioscience industries fall into a broad array of higher level industries, such as chemical and food manufacturing, professional, scientific and technical services, and increasingly distribution services.

The changing nature of biological research and its applications further complicates this task as the bioscience industry continues to evolve in the types of companies engaged and how they are represented within the standard industry classifications. It is important then to periodically re-examine how bioscience companies classify themselves within detailed industries and to consider how the evolving demands of new bioscience products and innovations are changing the range of companies involved in these activities.

For the first four reports tracking bioscience industry development, Battelle and BIO identified 27 detailed industries within the North American Industry Classification System (NAICs) at the most detailed six-digit level that aggregated into four major subsectors of the bioscience industry:

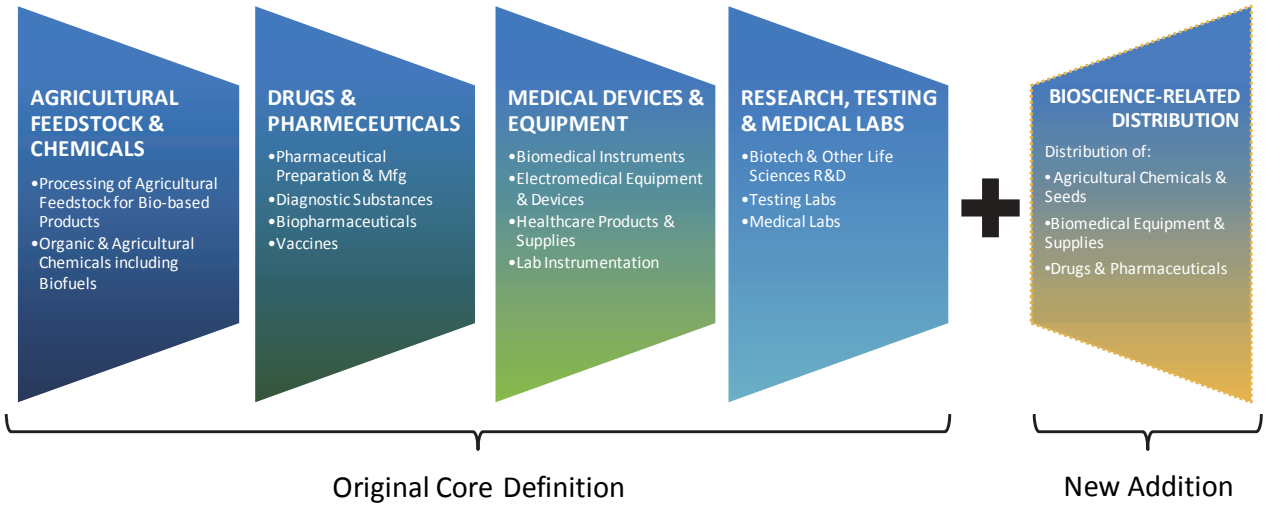
- **Agricultural Feedstock and Chemicals**, involving industries, for example, that utilize advances in biochemistry and biotechnology for producing products involved in crop protection, advanced seed, agricultural processing, bio-fuels, biodegradable materials from plant-based feedstock, sustainable industrial oils, lubricants and enzymes and bio-based catalysts for industrial processes.
- **Drugs and Pharmaceuticals**, involving industries that produce vaccines, biopharmaceuticals, and tissue and cell culture media.
- **Medical Devices and Equipment**, involving industries that produce a variety of biomedical products such as surgical instruments, orthopedic implants, bioimaging equipment, dental instruments, and patient care products (such as walkers, wheelchairs and beds).
- **Research, Testing, and Medical Laboratories**, involving emerging companies working to develop and commercialize new drug discovery/delivery systems and gene and cell therapies as well as more service-oriented firms involved in pre-clinical drug development, clinical trials, and research/laboratory support services. While primarily focused on human health, these companies also include those that are focused on research and testing for agriculture and veterinary uses.

For this fifth biennial report, Battelle and BIO have worked together to re-examine which detailed industries are best understood to comprise the bioscience industry. This examination has led to two important refinements from previous reports:

- The first refinement is to drop a number of detailed industries that have become more closely connected with the delivery of clinical services to patients than the development of new bioscience products. This includes three specific industries: ophthalmic goods manufacturing, which is involved in filling prescriptions for eyeglasses and contact lenses; dental laboratories, which fill orders for customized dentures, crowns, implants and orthodontic appliances; and diagnostic imaging centers that offer access to high end MRI, CAT scan, PET and ultrasound imaging services. Upon examination of the range of companies, these three industries are found to be less involved in creating products and services using biological knowledge and more engaged in direct patient services that use existing bioscience products and technologies.
- The second refinement involves the inclusion of a new fifth subsector for the bioscience industry in light of the changing nature of bioscience technology and applications. This new subsector is categorized as bioscience-related distribution. Increasingly bioscience-related distribution involves specialized approaches such as cold storage and highly regulated product monitoring, and new technologies for distribution such as automated pharmaceutical distribution systems. These include three detailed distribution industries: one associated with medical equipment and device distribution; another with drug distribution; and a third with agricultural-related chemicals and seed distribution. Each of these bioscience-related industries are becoming integral in the primary production of bioscience goods in an age of advanced logistics and the increasing specialized nature of biosciences product development.

This revised definition of the bioscience industry is depicted in Figure 1.

Figure 1. Revised Definition of the Bioscience Industry



The data and methodology appendix sets out a comparison table of the detailed industries under each bioscience industry subsector noting the changes made.

Going from industry classifications to measuring actual job performance requires having a comprehensive and longitudinal data source. Battelle and BIO continue to utilize the Quarterly Census of Employment and Wages (QCEW) managed by the U.S. Bureau of Labor Statistics. The QCEW is based on actual payroll data

required of employers that pay into the unemployment insurance system. This offers a built-in mechanism for accuracy and nearly comprehensive coverage, even at the county and state levels.

The QCEW tracks each place of business associated with a company, which it refers to as a business establishment. This means separately located branch plants and field offices of a company are typically measured as their own business unit. This has significant advantages in ensuring that employment is measured where workers actually work rather than where a company's headquarters is located. Another advantage of measuring at the business establishment level is that many companies span multiple industries, particularly at a detailed industry level. The different industry activities can be noted by having each business establishment separately coded based on their primary industry activity and not just the main activity of the overall company. Therefore, the establishment numbers in this report are not interchangeable with the number of companies in each state. In most instances, the number of establishments greatly exceeds the actual number of corporate entities as many companies have numerous establishments within a given state.

Key Findings

This fifth biennial report on the bioscience industry tracks employment trends through 2010, the most recent year available. This updated look at bioscience industry trends accounts for the full impact of the recent deep recession and the first year of the economic recovery.

In light of the refinements made in measuring the evolving composition of the bioscience industry, Battelle and BIO provide an analysis with the refined industry definitions going back to 2001. This offers an updated view of the resiliency of the bioscience industry over different phases of the recent business cycle, as well as allowing for a long term view of bioscience industry growth, even after a recession.

NATIONAL BIOSCIENCE INDUSTRY TRENDS

During the 2001 to 2010 period, the U.S. bioscience industry gained jobs, despite job losses in overall U.S. total private sector industry employment and among other leading knowledge-based industries.

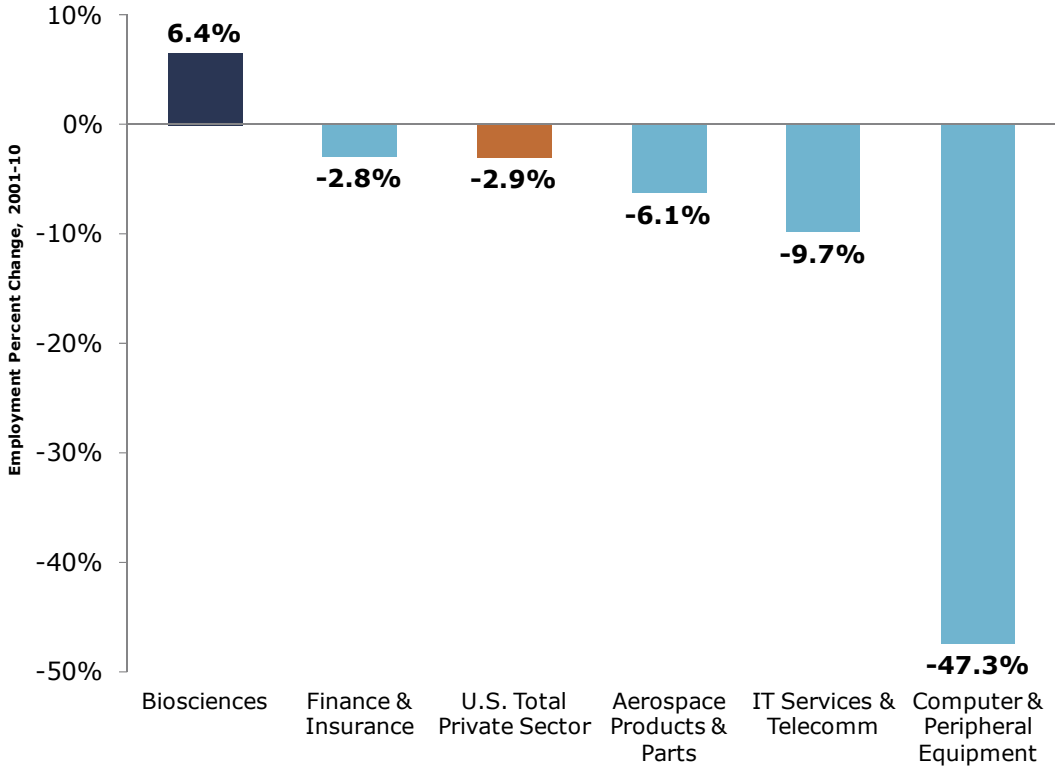
The period from 2001 to 2010 represents a time of significant economic growth from 2001 through 2007, a severe economic recession from the end of 2007 through 2009, and the first full year of a recovery from 2009 to 2010. It offers a unique perspective on the resiliency of an industry over a long-term period with the inevitable ups and downs of a business cycle.

The bioscience industry has demonstrated its growth and staying power during the longer term period, encompassing two business cycles. During the 2001 to 2010 period, the bioscience industry grew by 6.4 percent, adding more than 96,000 jobs. By comparison, total employment for all private sector industries in the U.S. fell by 2.9 percent, losing more than 3 million jobs (see Figure 2).

By comparison, other leading knowledge-based industries, including information technology services, aerospace, computer equipment and finance and insurance, all recorded net job losses over this same period.

Figure 2 depicts the difference in employment change during the 2001 to 2010 period for the bioscience industry, total private sector industries, and other leading knowledge-based industries.

Figure 2. Employment Trends in the Biosciences and Other Leading Knowledge-based Industries, 2001–10

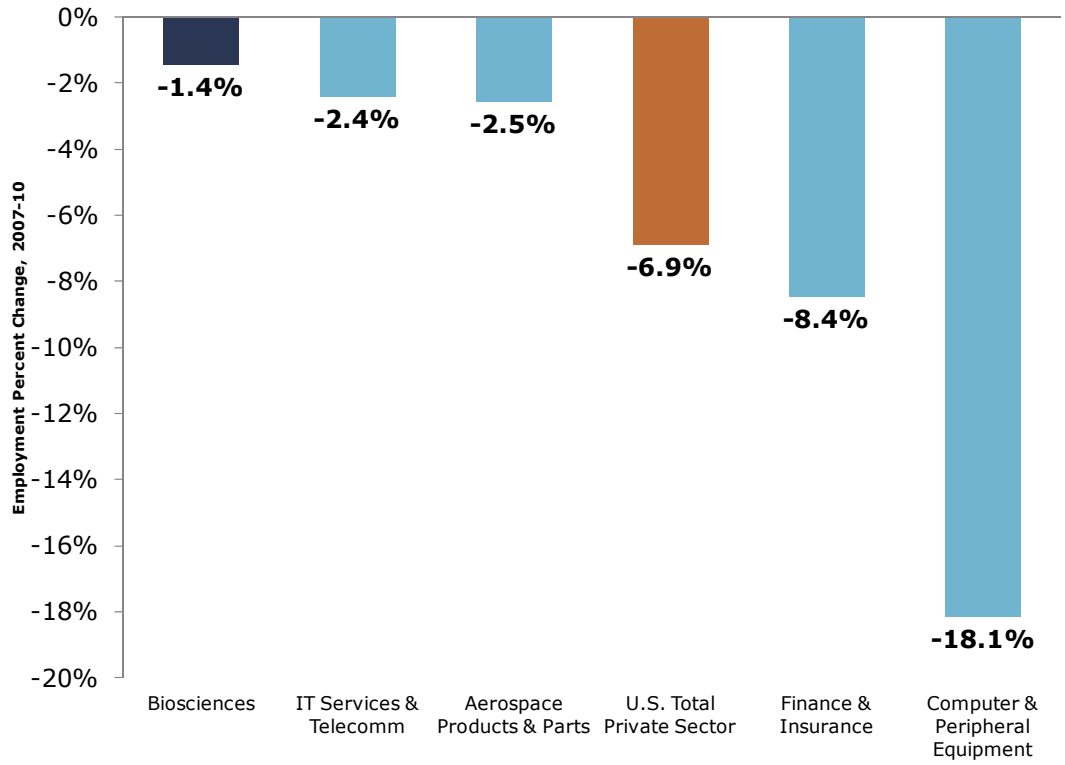


Source: Battelle analysis of Bureau of Labor Statistics, QCEW; enhanced file from IMPLAN.

Still, the bioscience industry was not immune from the recession and was still finding its footing in the first year of the recovery.

From 2007 to 2010, which represents the peak year before the onset of the recession through the first year of the recovery, bioscience industry employment fell by 1.4 percent or nearly 23,000 jobs. This decline, while disappointing, was quite muted. Total private sector employment, by comparison, fell 6.9 percent from 2007 to 2010, and other leading knowledge-based industries declined further than the biosciences as well (see Figure 3).

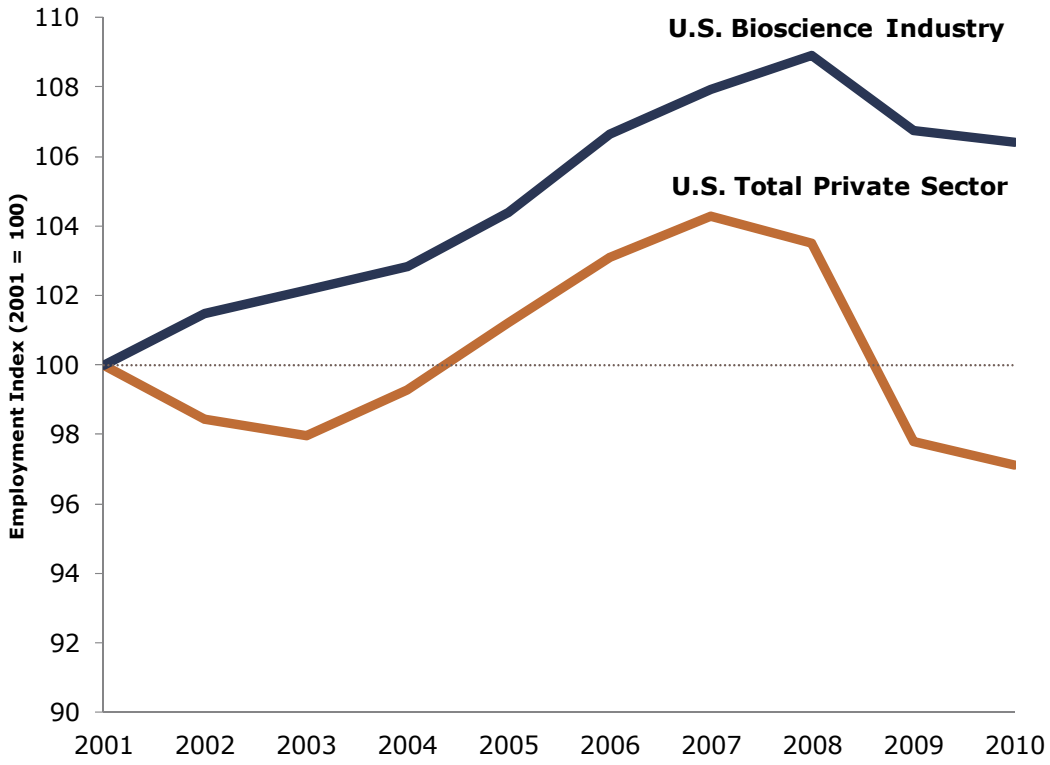
Figure 3. Employment Trends in the Biosciences and Other Leading Knowledge-based Industries, 2007–10



Source: Battelle analysis of Bureau of Labor Statistics, QCEW; enhanced file from IMPLAN.

What are particularly illuminating are the recent annual trends for the bioscience industry. As reported in the 2010 Battelle/BIO state-by-state study, the bioscience industry completed seven consecutive years of employment growth through the first year of the recession in 2008, though jobs increased by a mere 0.9 percent in 2008. In the second year of the recession in 2009, bioscience industry employment fell by 2 percent, well below the 5.5 percent decline recorded in national total private sector employment for 2009. In the first year of the recovery in 2010, the bioscience industry held generally steady, with a mere 0.3 percent job decline. This reflects the sluggish labor market conditions and reluctance to hire during the first year of the nascent recovery (see Figure 4).

Figure 4. U.S. Bioscience and Total Private Sector Employment, 2001–10, Indexed (2001=100)



Jobs in the bioscience industry remain among our nation's highest paying, with growth in average wages exceeding the national private industry sector.

Robust demand for today's high skilled bioscience workforce yields a significant wage premium and one that continues to widen with strong wage growth in recent years. Average wages paid to bioscience industry workers reached $82,697 in 2010, more than $36,000 or 79 percent greater than the average paid in the overall national private sector. Bioscience wage growth well outpaces that for the private sector, increasing by 13.1 percent in real (inflation-adjusted) terms since 2001 compared with just 4.4 percent pay raise among all industries.

CLOSER LOOK AT BIOSCIENCE INDUSTRY SUBSECTOR TRENDS

Within the bioscience industry, the research, testing, and medical laboratories subsector has grown consistently and significantly over the decade.

The job gains for the research, testing, and medical laboratories subsector through the 2001 to 2010 period reached a hefty 23.8 percent, adding nearly 87,000 jobs. More impressively, this subsector grew in employment every year from 2001 to 2010, even through the recession years of 2008 and 2009. The gains in this subsector demonstrate the importance of commercial research and development for the biosciences. It also reflects the outsourcing of many research and testing services previously done in-house by major biopharmaceutical companies, as well as the rise of molecular diagnostic testing as a key component of the industry.

The bioscience-related distribution subsector also fared well overall during the 2001 to 2010 period, but has faced job losses in recent years with the onset of the recession.

Bioscience-related distribution firms increased employment by a solid 6 percent over the decade, which translated into nearly 25,000 net new jobs. These gains were generated in the 2001 to 2007 expansion, when the subsector added more than 44,000 jobs, and have slowly eroded through the recession and first year of the recovery. Altogether, the bioscience-related distribution subsector has declined by 4.2 percent from 2007 to 2010, a loss of over 19,000 jobs, though still more moderate losses than those experienced by the private sector (-6.9 percent). This suggests that bioscience-related distribution may be very cyclical and highly responsive to the growth in other manufacturing related sectors of the bioscience industry.

The medical devices and equipment subsector has held its own overall, but with distinct ups and downs during the 2001 to 2010 period.

The medical devices and equipment subsector was generally flat during the 2001 to 2010 period. Employment declined a mere 0.3 percent overall, representing a loss of fewer than 1,000 jobs over the decade. This generally flat performance can be considered an achievement since there is a strong push towards increasing productivity in medical device and equipment manufacturing, akin to other advanced manufacturing industries. Still, the overall period masks a more interesting pattern of ups and downs that do not correspond exactly to the timing of the business cycles during the 2001 to 2010 period. Interestingly, medical devices and equipment lost employment steadily from 2001 to 2004, then picked up from 2005 to 2008 before declining again in 2009 and 2010.

Competitive challenges have marked the drop in employment in the drugs and pharmaceuticals subsector.

The drugs and pharmaceuticals subsector recorded a decline in employment from 2001 to 2010, falling 3.1 percent, a loss of nearly 9,400 jobs. However, this subsector had a more consistent pattern of growth with the business cycle. It grew at a slow but steady pace during the 2001 to 2007 growth period, increasing employment by 4.2 percent with a gain of nearly 13,000 jobs. From 2007 to 2010, declines in the drug and pharmaceutical subsector more than offset its earlier gains, falling 7 percent from 2007 to 2010, a loss of more than 22,000 jobs. This decline is on par with that of total private sector industry employment losses during the 2007 to 2010 period (-6.9 percent). The subsector appears to be facing considerable competitive challenges posed by the rise of generics, the slow pace of regulatory approval for new drugs and biopharmaceuticals, and the continued fast pace of mergers and acquisitions as firms in the subsector seek long-term profitability. In 2010, the subsector again paid the highest annual wages in the biosciences with the average industry worker earning more than $99,000—20 percent more than the average worker in the biosciences and twice the national average for the private sector. Despite the recent job losses, the high wages paid to pharmaceutical employees reflect the high value-adding activities in the subsector that demand a high-skilled workforce.

Agricultural feedstock and chemicals has had a rocky time during the 2001 to 2010 period but for different underlying reasons.

The sharpest decline among the bioscience industry subsectors was in agricultural feedstock and chemicals, where employment fell by 5.9 percent or 4,570 jobs overall from 2001 to 2010. The subsector had added jobs in five of the last six years though the steep job losses in the depths of the recession in 2008 have not been offset by the recent gains and is down overall by 5.5 percent since 2007. Ethanol production has remained the subsector's strength, steadily adding jobs throughout the decade and even over the recession.

STATE-BY-STATE BIOSCIENCE INDUSTRY TRENDS

The bioscience industry remains well distributed across the United States, with many states continuing to have strong niches in certain specializations.

Thirty four states and Puerto Rico have an employment specialization[6] in at least one of the five bioscience subsectors in 2010 (see Table 1). These include:

- 16 states specialized in Agricultural Feedstock & Chemicals
- 11 states and Puerto Rico specialized in Bioscience-related Distribution
- 12 states and Puerto Rico specialized in Drugs & Pharmaceuticals
- 14 states and Puerto Rico specialized in Medical Devices & Equipment
- 12 states and Puerto Rico specialized in Research, Testing, and Medical Labs.

Remarkably, 18 states and Puerto Rico are specialized in at least two of the five bioscience subsectors, suggesting that there are clear spillover impacts into multiple areas of industry focus from this knowledge-based industry cluster.

Indiana, New Jersey, and Puerto Rico stand out in having a specialization in four of the five bioscience subsectors.

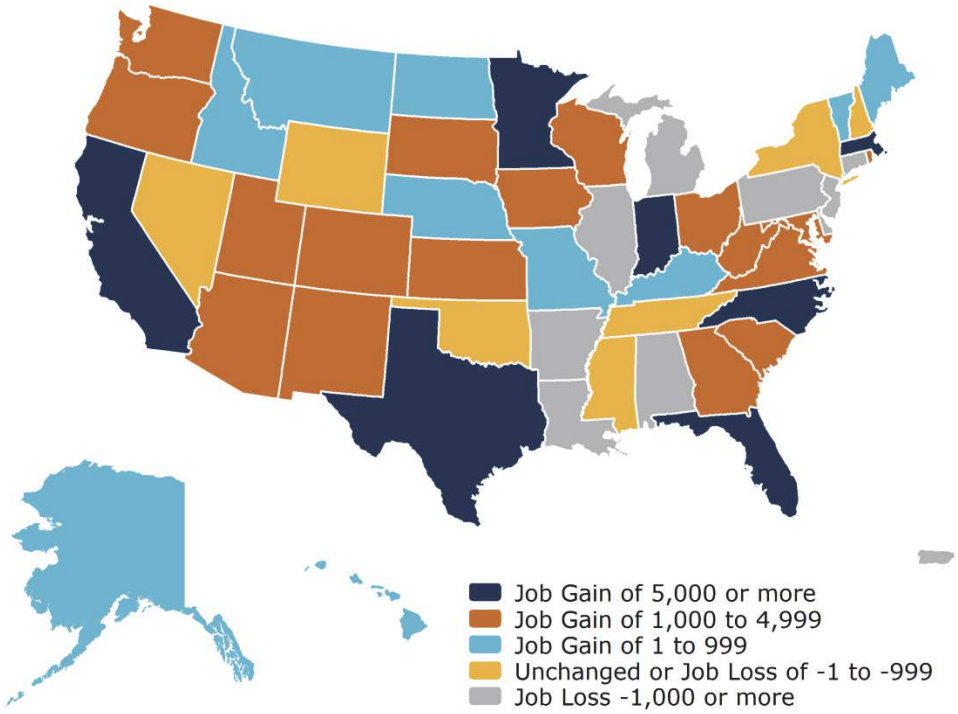
The longer term growth of the bioscience industry during the 2001 to 2010 period is widely distributed across the nation, with 34 states sharing in job gains.

The 34 states that gained bioscience industry jobs over the 2001 to 2010 period (see Figure 5) represented every region of the nation, indicating a broad impact as a result of the continued development of the bioscience industry:

- **Northeast** (Vermont, Maine, Massachusetts, and Rhode Island)
- **South** (Georgia, Florida, Kentucky, Maryland, North Carolina, South Carolina, Virginia, Texas, West Virginia)
- **Midwest** (Indiana, Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin)
- **West** (Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, New Mexico, Oregon, Utah and Washington)

[6] Employment concentration is a useful way in which to gauge a region's subsectors relative to the national average. State and regional location quotients (LQs) measure the degree of job concentration within the region relative to the nation. States or regions with an LQ greater than 1.0 are said to have a concentration in the subsector. When the LQ is significantly above average, 1.20 or greater, the state is said to have a "specialization" in the subsector.

Figure 5. Bioscience Employment Change by State, 2001–10



There also was a healthy mix of states realizing growth in total bioscience industry employment during the 2001–2010 period, including many states with well established, highly concentrated levels of bioscience industry as well as those emerging in bioscience industry development. Emerging states that grew by more than 30 percent during the 2001 to 2010 period included Vermont, South Carolina, Rhode Island, New Mexico, North Dakota, South Dakota, Oregon, and Arizona. The higher percentage growth levels reflected the smaller base of employment within these emerging states. Other fast growing states (20 to 30 percent growth) with well-established bioscience industry development included Utah, North Carolina and Minnesota.

Nearly half of the states added bioscience jobs from 2007—2010, covering the recession years and first year of the economic recovery—and all states grew in at least one subsector of the biosciences.

Even though national bioscience industry employment fell 1.4 percent from 2007 to 2010, 22 states gained jobs in the 3-year period and another 4 states declined by less than 1 percent. Among the leading states in total bioscience industry growth with 5 percent or greater job gains were North Dakota, Vermont, Utah, Arizona, Oregon, West Virginia, Nebraska and Wisconsin. States that grew employment but at a rate of less than 5 percent include Kentucky, Colorado, Texas, Massachusetts, Idaho, Virginia, South Dakota, Alaska, Washington, California, Louisiana, North Carolina, Wyoming, and Ohio.

What also stands out, as shown in Table 1, is that all states had at least one bioscience subsector in which they added jobs in recent years. This demonstrates that the breadth of bioscience industry development affords opportunities for all.

Figure 6. Bioscience Employment Change by State, 2007–10

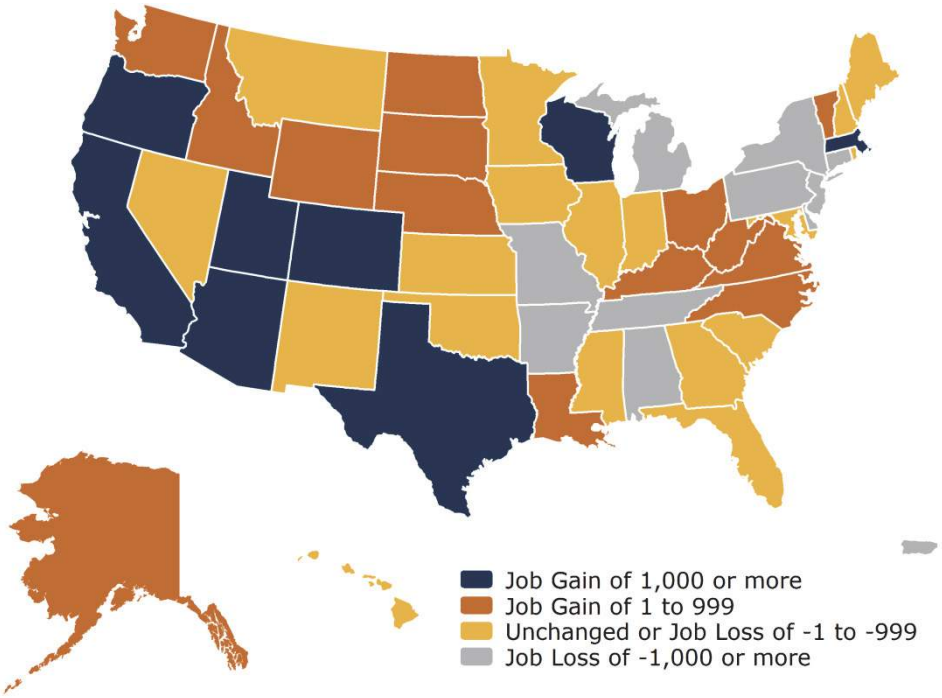


Table 1. State Specializations and Employment Growth by Major Bioscience Subsector, 2010

States	Agricultural Feedstock & Chemicals		Drugs & Pharmaceuticals		Medical Devices & Equipment		Research, Testing, & Medical Laboratories		Bioscience-related Distribution	
	Specialization	Growth, 2007–10	Specialization	Growth, 2007–10	Specialization	Growth, 2007–10	Specialization	Growth, 2007–10	Specialization	Growth, 2007–10
Alabama	●			●				●		
Alaska		●				●		●		
Arizona				●				●		●
Arkansas				●				●		
California			●		●		●	●		
Colorado		●			●	●		●		●
Connecticut		●	●		●	●				
Delaware					●	●	●		●	
District of Columbia		●				●				
Florida	●	●		●				●	●	
Georgia		●				●		●		
Hawaii				●		●	●	●		
Idaho	●			●			●	●	●	
Illinois	●		●			●		●	●	
Indiana	●	●	●		●	●		●	●	
Iowa	●	●						●	●	●
Kansas	●			●						●
Kentucky				●				●		●
Louisiana	●	●		●				●		
Maine				●		●				
Maryland			●	●			●	●		
Massachusetts			●	●	●		●	●		
Michigan		●				●				
Minnesota		●		●	●			●		
Mississippi	●					●		●		
Missouri	●	●								
Montana				●		●		●		
Nebraska	●	●			●	●			●	●
Nevada						●				
New Hampshire		●			●			●		
New Jersey		●	●		●	●	●	●	●	
New Mexico		●					●	●		
New York		●						●		
North Carolina	●		●	●		●	●	●		
North Dakota	●	●						●	●	●
Ohio		●		●		●		●		
Oklahoma		●		●				●		
Oregon				●				●		●
Pennsylvania			●				●			
Puerto Rico			●		●		●	●	●	●
Rhode Island			●					●		
South Carolina						●				
South Dakota	●	●			●	●		●	●	●
Tennessee	●			●		●		●	●	
Texas		●						●		●
Utah			●	●	●	●	●	●		●
Vermont				●	●	●				●
Virginia		●				●		●		
Washington		●				●	●	●		
West Virginia			●	●		●		●		
Wisconsin				●	●	●		●		
Wyoming	●	●		●						

Source: Battelle analysis of Bureau of Labor Statistics, QCEW; enhanced file from IMPLAN.

Note: A subsector specialization requires a state location quotient at or above 1.20.

Looking to the Future

The bioscience industry is clearly an important innovation-led sector with much promise for future growth. As the National Research Council explains in its study *A New Biology for the 21st Century,* advances in the life sciences have the potential to contribute innovative and mutually reinforcing solutions to global-reaching, societal challenges related to food, environment, energy and health, and at the same time, serve as the basis for new industries that will anchor the economies of the future.[7] Further amplifying this conclusion, an OECD study of the bioeconomy was able to estimate just how much advances in biological sciences would drive future bioscience industry growth. Based solely on recognized advances in biological sciences with a high probability of reaching the market, the OECD study of the bioeconomy estimates that by 2030, it is expected that bioscience innovations could contribute up to 35 percent of the output of chemicals and other industrial products, 80 percent of pharmaceuticals and diagnostic production, and 50 percent of agricultural output worldwide.[8]

While the potential future impacts of the bioscience industry are quite significant, it is important to note that the business models driving bioscience innovation are being constantly reshaped. As a result, the industry structure will continue to adapt and evolve. One emerging change is the importance of strategic collaborations for furthering innovation and competitiveness. An OECD study entitled *The Bioeconomy to 2030: Designing a Policy Agenda* notes that "the advantages of collaboration are greater network involvement in problem solving and testing, a reduction in transaction costs to acquire new knowledge, and a reduction in licensing costs when firms can access knowledge produced by the collaborative network at low or no cost."[9] Within the biosciences, these drivers for strategic collaborations are truly pronounced in the area of biopharmaceutical innovation. As a result of the continuing need to rationalize R&D expenditures due to impending patent expirations as well as the decline in productivity in the development and commercialization of new medical products, there is a growing desire to form value-added strategic collaborations. As Battelle and R&D Magazine report in the 2012 Global R&D Funding Forecast:

> "The retrenchment of pharma's conventional model has created significant R&D opportunities for universities, non-profits and governments…consider the Pfizer example, while reducing internal R&D, it has expanded its presence in Cambridge, MA, specifically to have better collaborative access to the great research institutions of the area and to adopt an open innovation posture. In a larger example intended to accelerate drug development, **GlaxoSmithKline, Novartis, Pfizer and Eli Lilly** have joined the Structural Genomics Consortium, a public-private partnership that supports the discovery of new medicines through open access research…At the same time, the federal government has become oriented to a larger role in early-stage drug R&D with initiatives like the National Center for Advancing Translational Sciences and the NIH's Common Fund. Foundations are also taking a more active role in funding and R&D toward treatments for the often difficult diseases in which they have an interest. **This convergence of public and private life science R&D toward open innovation and open source information—especially in areas needing considerable fundamental research—is a major change in the approach to funding and performing life science R&D."**[10]

[7] National Research Council, A New Biology for the 21st Century, National Academy of Sciences, 2009.

[8] OECD, The Bioeconomy to 2030, 2009, page 199.

[9] IBID, page 171.

[10] Battelle and R&D Magazine, "2012 Global R&D Funding Forecast", December 2011, page 15.

Another driver of change is what MIT calls the "Third Revolution"—that of the convergence of life sciences, physical sciences and engineering:

> "There have been two dramatic developments in life science research in the last 50 years—the molecular and cellular biology revolution and the genomics revolution. These two revolutions paved the way for the convergence revolution now taking shape. We believe that combining knowledge of engineering and physical science with life science expertise will build on recent advances in molecular and cellular biology and genomics and produce new breakthroughs."[11]

Examples of this convergence are already at hand, including the way nanotechnology is improving how drugs can be delivered and how information technology is unlocking a multitude of "hidden" secrets, from analyzing the human genome to advances in digital technology, which are improving how we diagnose diseases and monitor patients. Because of this convergence, the biosciences offer enormous potential for linking basic research innovations across a myriad of other disciplines, which in combination create new products and processes with new market opportunities.

This rise of convergence, in turn, reinforces the importance of strategic collaborations. With convergence, there is a strong need for a "bigger bench" of scientists—both within academia and industry—undertaking discovery and development. Convergence will require capabilities not typically possessed in a single organization and so lead to more collaboration and strategic partnering.

So, while the promise of bioscience-led innovations in the years to come is both realistic and far-reaching, its development will be very dynamic and will reshape its industries. Battelle and BIO will be in the trenches tracking this unfolding phenomenon.

[11] MIT, The Third Revolution: The Convergence of the Life Sciences, Physical Sciences and Engineering, January 2011, page 6.

U.S. Bioscience Industry: Current Status and Recent Trends

Introduction

The U.S. bioscience industry has a well documented track record of exceptionally strong performance in establishment, wage, and employment growth. Since 2001 the bioscience industry has followed a strong upward trajectory, maintaining resilient growth through the first year of the recent, deep recession.

Now in 2012, we again assess the state of the industry and recent trends. Key questions emerged, including: How did the industry weather the recession years and a nascent recovery? Would individual states or major subsectors show uneven performance? In this updated analysis we set out to answer these questions.

Bioscience firms were indeed impacted by the recession that began in late 2007 and lasted through mid-2009, though the employment impacts were generally muted. The sector continued to add jobs in 2008 at a modest pace, thus recording its seventh consecutive year of job gains—as far back as comparable detailed data are available. In 2009, with the global economy reeling in recession, the national bioscience industry shed 2 percent of its jobs. This compares favorably to a much steeper 5.5 percent job loss for the overall national private sector in 2009. By 2010, national employment numbers leveled off, with the biosciences remaining essentially flat (a -0.3 percent decline).

Instead of falling neatly into a single high level industry classification, the biosciences are best understood as a grouping of diverse industries with a common link—the application of biological scientific knowledge.

The robustness and resilience of the biosciences is further evidenced when compared with other major knowledge-based industries. Since 2007, the biosciences shed 1.4 percent of its jobs, while other industries fared much worse: IT services and telecommunications (down 2.4 percent); aerospace (down 2.5 percent); finance and insurance (down 8.4 percent); and computer hardware (down 18.1 percent).

It is important to examine the various and diverse subsectors of the bioscience industry in order to better understand the strengths and challenges of the industry. The diverse nature of the U.S. bioscience industry is evidenced by varied performance among subsectors as well as across states and regions. Furthermore, many states and regions have developed specialization in one or more of the industry's subsectors.

Defining the Biosciences: An Evolving Industry Requires a Re-examined Approach

Measuring the bioscience industry is not straight-forward because of its diversity of commercial applications. Instead of falling neatly into a single high level industry classification, the biosciences are best understood as a grouping of diverse industries with a common link—the application of biological scientific knowledge. Defining the bioscience industry requires analysis of standard industrial classifications at the most detailed level, so as to accurately identify establishments and individuals engaged in appropriately related enterprise. These bioscience industries fall into a broad array of higher level industries, such as chemical and food manufacturing, professional, scientific and technical services and, increasingly, distribution services.

As the bioscience industry has evolved, so too has the manner in which the North American Industry Classification System (NAICS) has been interpreted and used by companies, as well as state and federal statistical systems. For this reason, Battelle and BIO have worked to re-examine and re-evaluate the NAICS-based definition used in this report.

Prior editions of Battelle-BIO State Initiatives Reports aggregated four major bioscience industry subsectors from twenty-seven detailed industries within the NAICS system, using the most detailed 6-digit level data available. Those subsectors are:

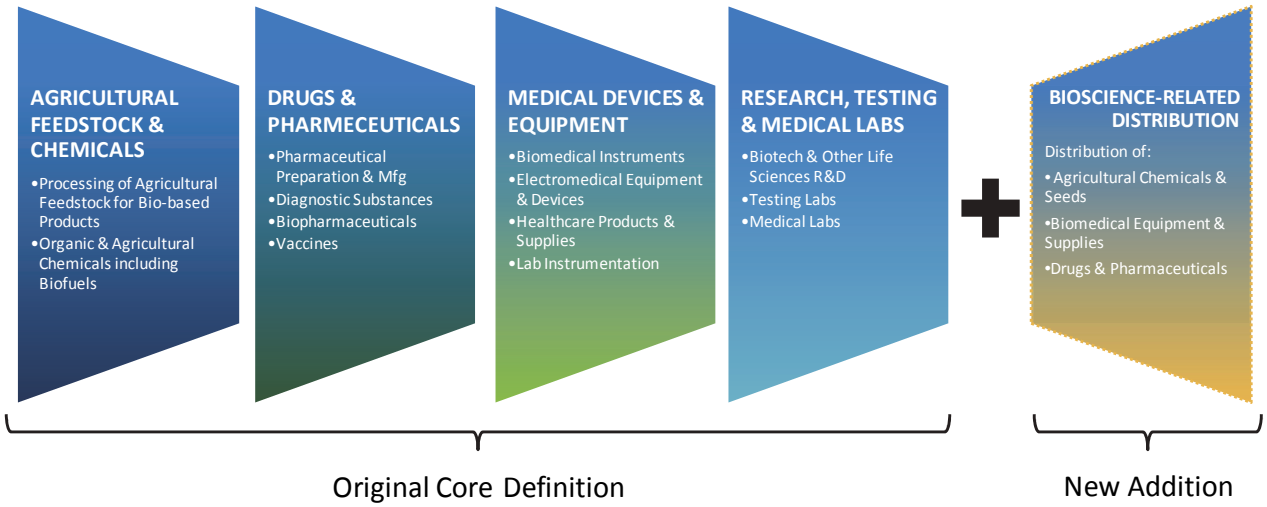
- **Agricultural feedstock and chemicals**
    - Firms engaged in agricultural production and processing, organic chemical manufacturing, and fertilizer manufacturing. The subsector includes the emerging industry activity in the production of ethanol and other biofuels.
- **Drugs and pharmaceuticals**
    - Firms that develop and produce biological and medicinal products and manufacture pharmaceuticals and diagnostic substances.
- **Medical devices and equipment**
    - Firms that develop and manufacture surgical and medical instruments and supplies, laboratory equipment, electromedical apparatus including MRI and ultrasound equipment, dental equipment and supplies, and ophthalmic products.
- **Research, testing, and medical laboratories**
    - Firms engaged in research and development in biotechnology and other life sciences, life science testing laboratories, and medical laboratories and other diagnostic centers.

For this fifth biennial report, re-examination of the definition by Battelle and BIO has led to two important refinements:

- We've chosen to drop a number of detailed industries that have become more closely connected with the delivery of clinical services to patients than the development of new bioscience products. This includes three specific industries: ophthalmic goods manufacturing, which is involved in filling prescriptions for eyeglasses and contact lenses; dental laboratories, which fill orders for customized dentures, crowns, implants and orthodontic appliances; and diagnostic imaging centers that offer access to high end MRI, CAT scan, PET and ultrasound imaging services. Upon examination of the range of companies and primary activities, these three industries are found to be less involved in creating products and services using biological knowledge and more engaged in direct patient services involving using existing bioscience products and technologies.
- We've added a new fifth subsector for the bioscience industry in light of the changing nature of bioscience technology and applications. This new subsector is categorized as bioscience-related distribution. Increasingly, bioscience-related distribution involves new and specialized approaches —such as cold storage, highly regulated product monitoring, and automated pharmaceutical distribution systems. These dedicated bioscience-related distribution networks are comprised of three detailed distribution industries: one associated with medical equipment and device distribution; another with drug distribution; and a third with agricultural related chemicals and seed distribution. Each of these bioscience-related industries are becoming integral in the primary production of bioscience goods in an age of advanced logistics and the increasing specialized nature of biosciences product development.

This revised definition of the bioscience industry is depicted in Figure 7.

Figure 7. Revised Definition of the Bioscience Industry



The data and methodology section that follows sets out a comparison table of the detailed industries under each bioscience industry subsector noting the changes made.

Research and economic activity within a sixth center of bioscience activity might include academic health centers, research hospitals, and other biomedical research-driven institutions. Many U.S. hospitals partner with universities and other research institutes to further advances in the biosciences with a particular focus on biomedical and healthcare applications. Unfortunately, current industrial classifications and available data do not allow for an isolation of these research-oriented establishments outside of the larger hospitals sector. **Though it cannot be reliably quantified, the research-oriented hospitals sector should be recognized as an important element of the bioscience industry cluster.**

Industry Employment Data Source

To measure the size, relative concentration, and overall employment impacts of the biosciences in the United States, Battelle tabulated employment, establishment, and wage data for each state, the District of Columbia, and Puerto Rico. With revisions to the industry definition in this report, the data were updated for each of the five bioscience industry subsectors for the full 2001 through 2010 period, the most current, detailed, and comparable annual data available.

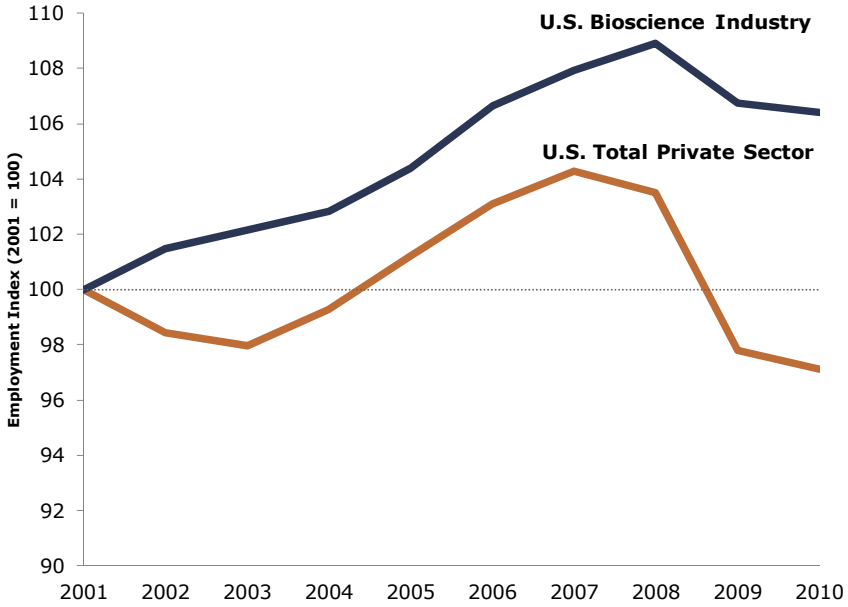
The Bureau of Labor Statistics (BLS) Quarterly Census of Employment and Wages (QCEW) program data are used as the primary data source for this industry analysis. The QCEW provides the most accurate employment data for detailed industries at the sub-national level. The data represent a virtual "census" of workers covered under the Unemployment Insurance system, as reported by employers.

The Size, Composition, Growth, and Impact of the U.S. Bioscience Sector

Overview

National employment in the bioscience industry totaled 1.61 million in 2010, with these jobs spanning 70,006 individual business establishments.[12] Going back nearly a decade, bioscience companies have added nearly 97,000 new jobs or 6.4 percent to their employment base since 2001. The recession that began in late 2007 and intensified in 2008 slowed the industry's momentum and led to a modest contraction, with the industry shedding 1.4 percent of its base since the economic peak in 2007. The job losses occurred in 2008 and 2009 with the majority in 2008 when the industry shed 2 percent of jobs (Figure 8).

Figure 8. U.S. Bioscience and Total Private Sector Employment Trend, 2001–10, Indexed (2001=100)



Source: Battelle analysis of BLS, QCEW data; enhanced file from IMPLAN.

The biosciences have over the past decade consistently outpaced the overall national private sector. During the economic expansion from 2001 through 2007, the industry added new jobs at a rate nearly twice that for the private sector. Since 2007, U.S. private sector employment has contracted by 6.9 percent compared with just 1.4 percent for the biosciences.

While employment growth stalled in a difficult business cycle relative to the previous rapid gains, bioscience firms have extended their reach and presence in their physical footprint in the expansion of individual business establishments. Bioscience companies now operate just over 70,000 establishments across the U.S. Steady gains continued even through the recession years and since 2001 the industry has added more than 7,900 establishments—a nearly 13 percent increase overall. The vast majority of the gain in bioscience establishments has come from firms in the research, testing, and medical laboratories subsector, where service-driven companies tend to have smaller operations compared with the larger operations of their manufacturing-oriented counterparts (Table 2).

[12] An establishment in the QCEW program is commonly understood as a single economic unit, such as a farm, a mine, a factory, or a store, that produces goods or services. Establishments are typically at one physical location and engaged in one, or predominantly one, type of economic activity for which a single industrial classification may be applied. A firm, or a company, is a business and may consist of one or more establishments, where each establishment may participate in different predominant economic activity.

Table 2. U.S. Bioscience Employment and Establishments, 2010 and Changes, 2001–10 and 2007–10

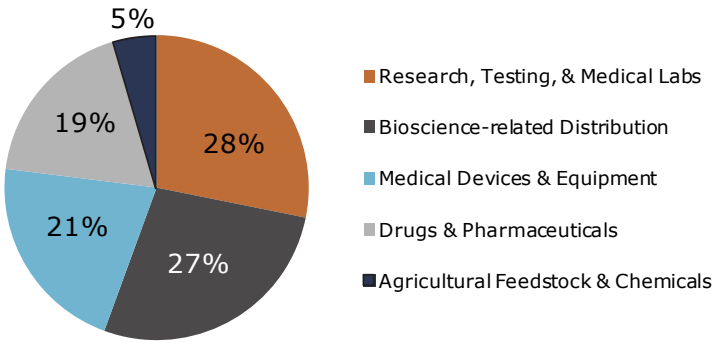
Bioscience Subsector	2010 Establishments	Change in Establishments, 2001–10	Change in Establishments, 2007–10	2010 Employment	Change in Employment, 2001–10	Change in Employment, 2007–10
Agricultural Feedstock & Chemicals	1,760	2.2%	4.5%	72,988	-5.9%	-5.5%
Bioscience-related Distribution	36,170	-1.1%	-0.3%	440,394	6.0%	-4.2%
Drugs & Pharmaceuticals	2,908	11.3%	6.5%	296,759	-3.1%	-7.0%
Medical Devices & Equipment	6,957	11.7%	7.7%	343,468	-0.3%	-0.8%
Research, Testing, & Medical Laboratories	22,212	48.9%	20.1%	451,923	23.8%	6.1%
Total Biosciences	**70,006**	**12.8%**	**6.7%**	**1,605,533**	**6.4%**	**-1.4%**

Source: Battelle analysis of BLS, QCEW data; enhanced file from IMPLAN.

The **research, testing, and medical labs** subsector is largest of the five, employing more than 450,000 in 2010 or nearly 3 in 10 U.S. bioscience industry workers (see Figure 9). The subsector has few equals among all industries in terms of its robust performance year after year through the turmoil of business cycles including the recent deep recession. Over the past decade, research, testing, and medical lab jobs have increased by 24 percent—translating into nearly 87,000 new jobs. The gains have continued during and through the recent recession, with the subsector adding 6 percent to its employment base since 2007.

The **bioscience-related distribution** subsector is also quite large, spanning more than 36,000 establishments that employ over 440,000 in 2010, and accounting for 27 percent of bioscience industry employment. Subsector performance has been cyclical with firms steadily adding jobs from 2002 through the economic peak in 2007. However, this subsector has since been impacted by the recent recession, with firms shedding some of these job gains in 2008 and 2009 and unable to fully rebound with modest job losses again in 2010. Since 2007, subsector jobs have declined by 4.2 percent, a rate still below that for the overall private sector (-6.9 percent). Despite the recent contraction, employment overall is up since 2001 by nearly 25,000 jobs or 6 percent.

Figure 9. Employment Composition of the U.S. Bioscience Industry, 2010

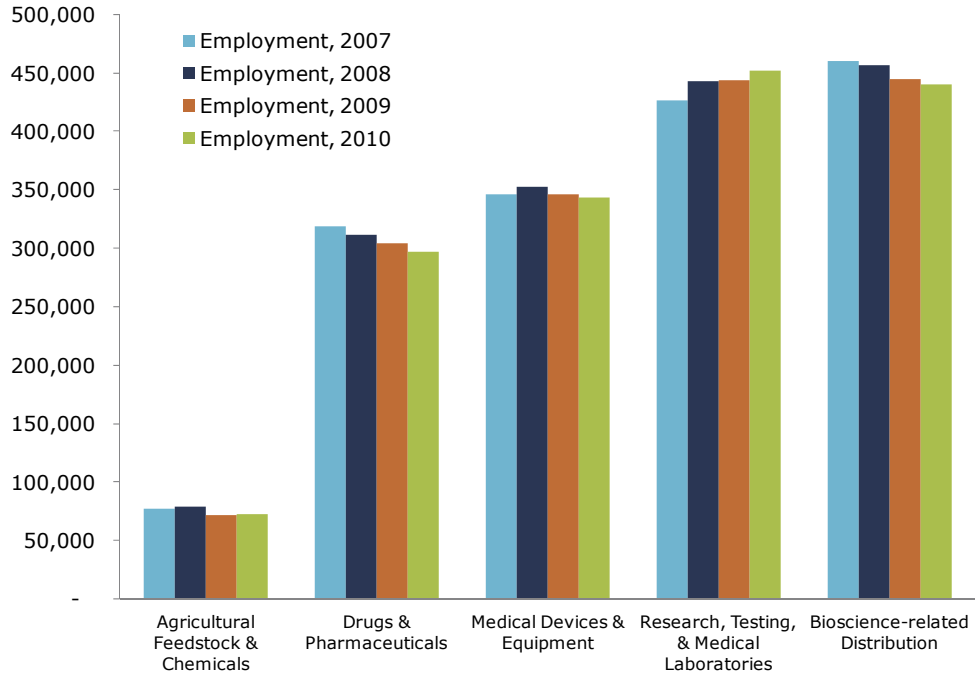


The **medical devices and equipment** subsector employs about one in five workers in the bioscience industry, totaling more than 343,000 jobs in 2010 that span nearly 7,000 advanced manufacturing establishments. The subsector entered the recession with momentum—from 2005 through even the first year of the recession in 2008, the subsector steadily added jobs before decreasing by a modest 9,000 jobs or 2.6 percent over the 2008–2010 period. Looking out over the decade, medical devices has weathered relatively minor ups and downs in employment and ended 2010 essentially flat compared with 2001, down just 0.3 percent over the decade.

The national **drugs and pharmaceuticals** subsector has steadily shed jobs since the recession began in late 2007, employing nearly 297,000 by 2010. This rate of job loss essentially matches that for the overall U.S. private sector since 2007 and both are down overall by 7 percent since the national economy peaked in 2007. The decade's peak employment for the subsector was reached back in 2002 and 2003 at 320,000 jobs and though pharmaceutical manufacturers had modest job gains from 2005 through 2007, the subsector remains below this level.

At 5 percent of bioscience industry employment, the **agricultural feedstock and chemicals** subsector is the smallest of the five with nearly 73,000 employed in 2010 across 1,760 individual establishments. The subsector rode the ups and downs of the business cycle in recent years and resumed job growth in 2010. Agricultural bioscience companies have added jobs in five of the last six years though the steep job losses in the depths of the recession in 2008 have not been offset by the recent gain and since 2007 the subsector is down overall by 5.5 percent.

Figure 10. U.S. Employment by Bioscience Subsector, 2007–10



Broader Impacts of the Bioscience Industry: Employment Multipliers

The biosciences, like other industries, have interdependent relationships with suppliers of other goods and services. The sector both supports and depends upon other entities to supply everything from business services to commodity inputs. As a result, the industry has a regional and national economic reach and impact that is greater than its total direct employment or earnings might suggest.

State employment multipliers are used to measure the additional impact of bioscience jobs. Multipliers quantify the broad ripple effect where an industry creates and supports additional economic activities. The Bureau of Economic Analysis (BEA) has developed regional factors to conduct this type of impact analysis using its Regional Input-Output Modeling System—also known as RIMS II.

Battelle has calculated state and national employment impact factors for each bioscience subsector using the direct-effect employment multipliers provided by BEA. The multipliers represent the total change in number of jobs in all industries (direct, indirect, and induced effects) that result from a change of one job in the corresponding industry sector. At the national level, the multipliers range from 2.4 for bioscience-related distribution, to 5.6 for agricultural feedstock and chemicals.

The total indirect and induced employment impact of the 1.6 million U.S. bioscience jobs is an additional 3.4 million jobs throughout the remainder of the economy. Together, these direct, indirect, and induced

bioscience job impacts account for a total employment impact of 5.1 million jobs (rounded figures do not sum to rounded total). This amounts to an overall bioscience direct-effect employment multiplier of 3.2.[13]

Bioscience Wages

The biosciences continue to generate high-skilled jobs, drawing its workforce from a national and often international talent pool that include scientists, lab technicians, engineers, computer scientists, statisticians, and advanced production occupations. In turn, bioscience workers earn a substantial wage premium relative to the overall private sector. In 2010, U.S. bioscience industry employees earned $82,697 on average—79 percent greater than the national private sector average. This wage gap has widened since 2001 when it stood at 65 percent (see Table 3).

Table 3. Average Annual Wages in the Biosciences and Other Major Industries, 2010

U.S. Average Annual Wages per Employee, 2010		
Drugs & Pharmaceuticals	**$**	**99,486**
Finance & Insurance	$	84,516
Research, Testing, & Medical Laboratories	**$**	**84,065**
Total Biosciences	**$**	**82,697**
Bioscience-related Distribution	**$**	**80,049**
Professional, Scientific, & Technical Services	$	77,313
Information	$	74,382
Medical Devices & Equipment	**$**	**72,301**
Agricultural Feedstock & Chemicals	**$**	**70,869**
Manufacturing	$	57,511
Construction	$	49,588
U.S. Total Private Sector	**$**	**46,317**
Transportation & Warehousing	$	44,198
Real Estate & Rental & Leasing	$	43,779
Health Care & Social Assistance	$	43,732
Retail Trade	$	26,655

Source: Battelle analysis of BLS, QCEW data; enhanced file from IMPLAN.

Despite its employment challenges, the drugs and pharmaceuticals subsector continues to pay the highest wages among the major subsectors, with the average industry worker earning more than $99,000—20 percent more than the average worker in the biosciences and twice the national average for the private sector. The high wages paid to pharmaceutical employees reflect the high value-adding activities in the subsector that require a high-skilled workforce.

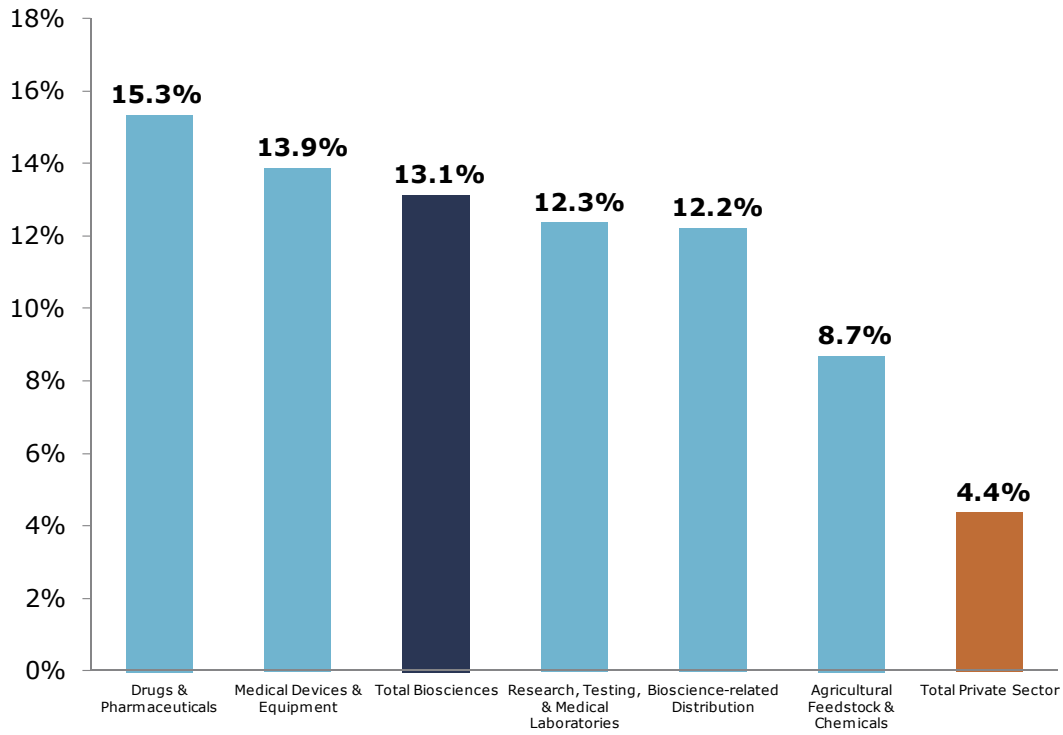
Growth in bioscience industry average wages continues to exceed that for the national private sector. Since 2001, real (inflation-adjusted) earnings have increased by 13 percent compared with 4 percent for the private sector overall. Most subsectors have increased real wages to workers by double-digits over the decade with drugs and pharmaceuticals and medical devices leading the way in wage gains at 15 percent and 14 percent, respectively (Figure 11).

Beginning in 2007, wage growth has slowed with real total bioscience wages increasing just 0.6 percent through 2010. Four of five industry subsectors have increased wages since 2007 by 1 percent. The only

[13] National employment impact analysis in this report is no longer comparable with that from prior editions due to both a change in the industry definition as well as changes in BEA methodology. BEA no longer calculates employment multipliers at the national level which had included interstate activity; therefore, the U.S. multipliers presented here for the bioscience industry are lower and no longer comparable with those from prior Battelle/BIO reports.

subsector to decline was bioscience-related distribution, which has seen average wages fall slightly by 0.4 percent in real terms.

Figure 11. Change in Real Average Annual Wages in the Biosciences and the Total Private Sector, 2001–10



The following section provides a more in-depth examination of employment trends among each of the five major bioscience subsectors. Data were tabulated for each state, the District of Columbia, and Puerto Rico to determine the size and relative job concentration within each subsector. In addition, employment growth and loss were calculated to present recent trends.

Employment size measures the absolute level of jobs within each region. To allow for meaningful comparisons, each region's share of total U.S. employment was analyzed. States with more than 5 percent of national employment are designated "large"; states with more than 3 percent but less than 5 percent are referred to as "sizable."

Employment concentration is a useful way in which to gauge a region's subsectors relative to the national average. State and regional location quotients (LQs) measure the degree of job concentration within the region relative to the nation. States or regions with an LQ greater than 1.0 are said to have a concentration in the subsector. When the LQ is significantly above average, 1.20 or greater, the state is said to have a "specialization" in the subsector.

The level of **employment growth or loss** during 2007 to 2010 provides a snapshot of recent progress in growing a state's bioscience sector. This is useful when examining the recent recession and early stage of the recovery. In this analysis, job growth or loss was measured by absolute employment gains or losses, as percent changes may overstate trends in those states with a smaller subsector employment base.

AGRICULTURAL FEEDSTOCK and CHEMICALS

The agricultural feedstock and chemicals subsector applies life sciences knowledge, biochemistry, and biotechnologies to the processing of agricultural goods and the production of organic and agricultural chemicals. The subsector also includes activities around the production of biofuels.

Examples of Products

- Fertilizers, pesticides, herbicides, and fungicides
- Corn and soybean oil
- Ethanol and biodiesel fuels
- Biodegradable materials synthesized from plant-based feedstock
- Biocatalysts

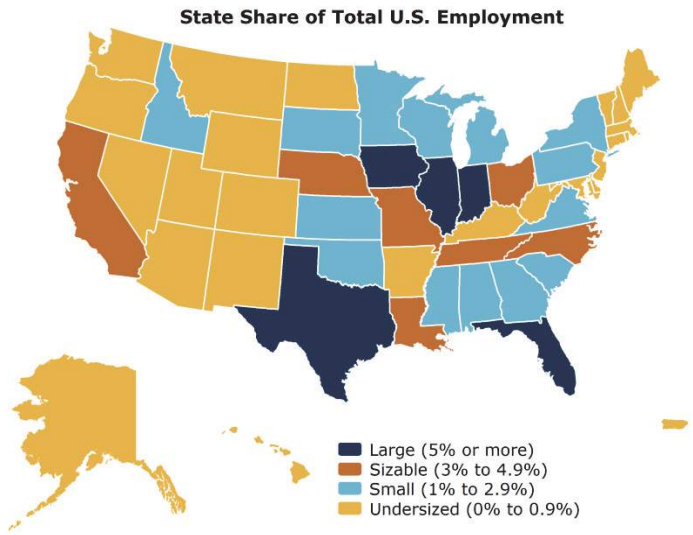
Examples of Companies

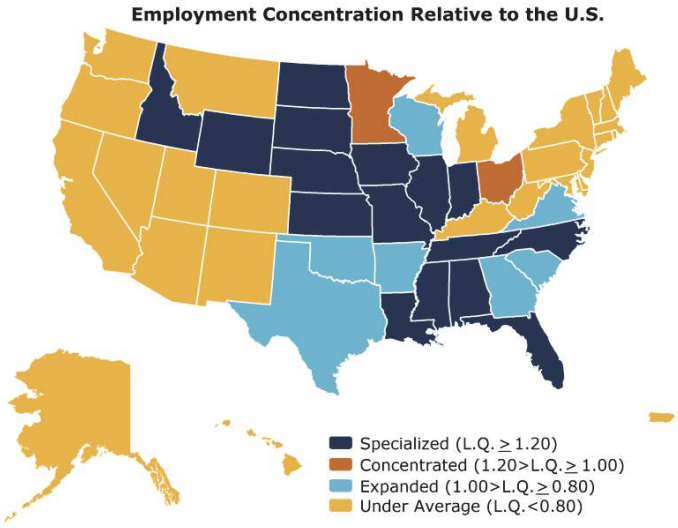
- Abengoa
- Archer Daniels Midland
- BASF Plant Science
- Bayer CropScience
- Cargill
- Dow AgroSciences
- DuPont
- Intrepid Potash
- Monsanto
- Novozymes
- Poet
- Scotts Miracle-Gro
- Syngenta

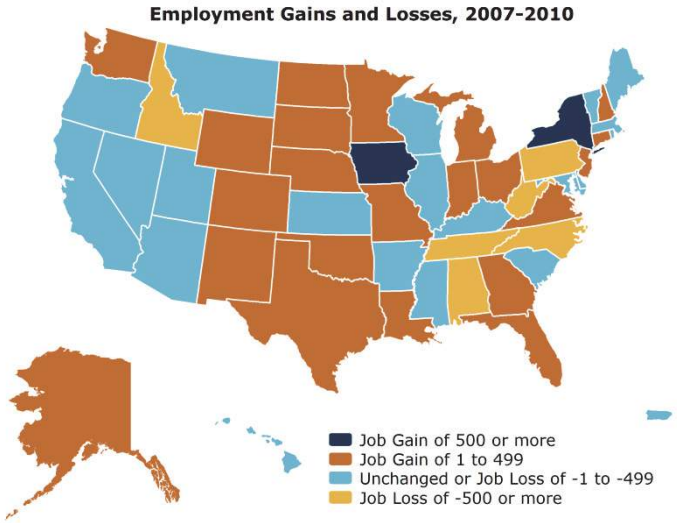
States that are Both Large and Specialized*

- Illinois
- Iowa
- Florida
- Indiana

*States are listed in descending order by subsector employment levels.







Agricultural Feedstock & Chemicals

Employment in the national agricultural feedstock and chemicals subsector made up 5 percent of bioscience employment in 2010 after weathering the ups and downs of the business cycle in recent years and resuming job growth in 2010. U.S. agricultural biosciences firms employed 72,988 in 2010 across nearly 1,800 individual business establishments. The subsector has added jobs in five of the last six years, though the steep job losses in the depths of the recession in 2008 have not been offset by the recent gain and since 2007 is down overall by 5.5 percent.

The subsector has two major components—agricultural feedstock which includes the processing of agricultural goods and those that drive the supply chain for bio-based products; and organic and agricultural chemicals which span the production of fertilizers, pesticides, herbicides, to biofuels. The larger of the two, organic and agricultural chemicals, has experienced some employment gain since 2007 driven by the steady hiring in ethanol production facilities. Since 2001, the ethanol sector has increased employment by 200 percent.

State Leaders & Highlights

EMPLOYMENT SIZE: Agricultural bioscience employment is well distributed across the U.S. with the largest 10 states accounting for just 62 percent of jobs.

- Large States: Illinois, Iowa, Florida, Texas, Indiana
- Sizable States: Ohio, Tennessee, California, Missouri, Louisiana, North Carolina, Nebraska

EMPLOYMENT CONCENTRATION: Sixteen states have a specialized concentration of jobs in the agricultural feedstock and chemicals subsector, more than for any other subsector. These concentrations are generally more in the Midwest and South.

- Specialized States: Iowa, Nebraska, South Dakota, Idaho, Indiana, Louisiana, Illinois, North Dakota, Wyoming, Tennessee, Mississippi, Missouri, Alabama, Florida, Kansas, North Carolina
- Concentrated States: Ohio, Minnesota

EMPLOYMENT GROWTH: From 2007–10, half of all states experienced some increase in subsector jobs with New York and Iowa having substantial increases.

LARGE and SPECIALIZED STATES: Four states have both a large employment base and a specialized concentration of jobs in agricultural feedstock and chemicals (Table 4).

Table 4. States with Large and Specialized Employment in Agricultural Feedstock and Chemicals, 2010

State	Establishments, 2010	Employment, 2010	Location Quotient, 2010	Share of U.S. Employment
Illinois	89	8,263	2.58	11.3%
Iowa	128	7,578	9.24	10.4%
Florida	110	5,450	1.32	7.5%
Indiana	45	4,544	2.89	6.2%

Source: Battelle analysis of BLS, QCEW data; enhanced file from IMPLAN.

DRUGS and PHARMACEUTICALS

The drugs and pharmaceuticals subsector produces commercially available medicinal and diagnostic substances. The subsector is generally characterized by large multinational firms heavily engaged in R&D and manufacturing activities to bring drugs to market.

Examples of Products

- Vaccines
- Targeted disease therapeutics
- Biopharmaceuticals
- Tissue and cell culture media
- Dermatological/topical treatments
- Diagnostic substances
- Animal therapeutics and vaccines

Examples of Companies

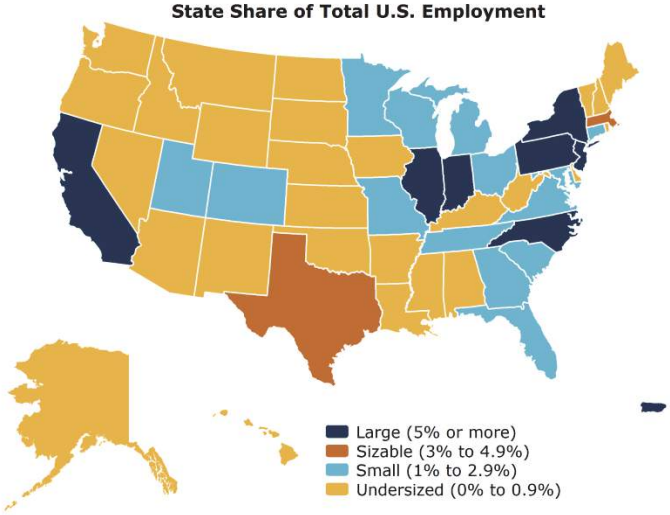
- Abbott Laboratories
- Amgen
- Biogen Idec
- Cornerstone Therapeutics
- Eli Lilly & Co.
- Merck & Co.
- Novartis
- Pfizer
- Roche Group – Genentech
- Sanofi-Aventis/Sanofi Pasteur

States that are Both Large and Specialized*

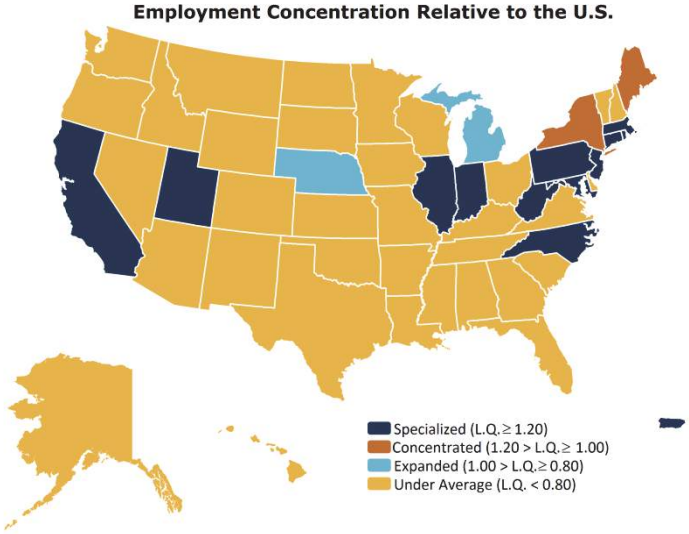
- California
- New Jersey
- Pennsylvania
- North Carolina
- Illinois
- Puerto Rico
- Indiana

*States are listed in descending order by subsector employment levels.

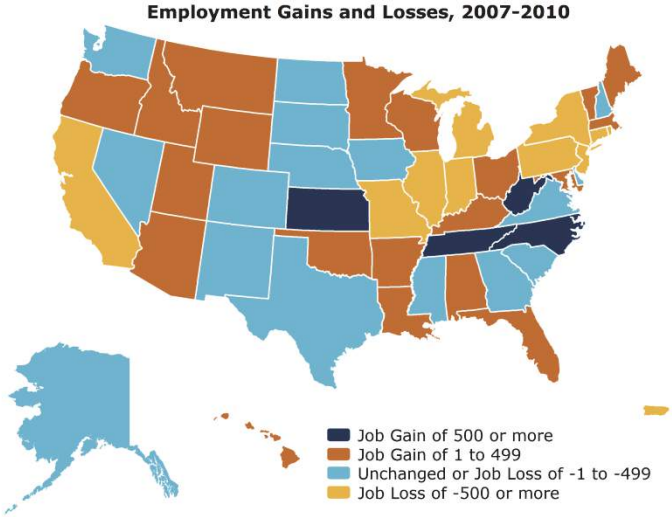
State Share of Total U.S. Employment



Employment Concentration Relative to the U.S.



Employment Gains and Losses, 2007-2010



Drugs & Pharmaceuticals

The national drugs and pharmaceuticals subsector has steadily shed jobs since the recession began with average annual declines of 2.4 percent since 2007 and subsector employment stood at 296,759 by 2010. This rate of job loss mirrors that of the overall U.S. private sector since 2007.

A distinguishing characteristic of the drugs and pharmaceuticals subsector is its high wages. In 2010, the subsector again had the highest annual wages in the biosciences with the average industry worker paid more than $99,000—20 percent more than the average worker in the biosciences and twice the national average for the private sector. The high wages paid to pharmaceutical employees reflect the high value-adding activities in a subsector that demands a high-skilled workforce.

While pharmaceutical preparation is by far the largest component of this subsector and has accounted for the majority of job losses in recent years, two other smaller sectors have added jobs since 2007. In-vitro diagnostic substances and biological product manufacturing have increased their employment by 8 percent and 5 percent, respectively.

State Leaders & Highlights

EMPLOYMENT SIZE: In terms of geography, drugs and pharmaceuticals manufacturing is more highly concentrated among fewer states than the other bioscience subsectors. The two largest employment states—California and New Jersey—combine to employ one in four subsector workers nationally.

- Large States: California, New Jersey, Pennsylvania, North Carolina, New York, Illinois, Puerto Rico, Indiana
- Sizable States: Texas, Massachusetts

EMPLOYMENT CONCENTRATION: Twelve states and Puerto Rico have a specialized concentration of jobs in the drugs and pharmaceuticals subsector.

- Specialized States: Puerto Rico, New Jersey, Indiana, North Carolina, Connecticut, Utah, West Virginia, Pennsylvania, Illinois, California, Massachusetts, Rhode Island, Maryland
- Concentrated States: Maine, New York

EMPLOYMENT GROWTH: From 2007–10, 24 states experienced some increase in subsector jobs. West Virginia, North Carolina, Kansas, and Tennessee recorded substantial job increases.

LARGE and SPECIALIZED STATES: Six states and Puerto Rico have both a large employment base and a specialized concentration of jobs in drugs and pharmaceuticals (Table 5).

Table 5. States with Large and Specialized Employment in Drugs and Pharmaceuticals, 2010

State	Establishments, 2010	Employment, 2010	Location Quotient, 2010	Share of U.S. Employment
California	466	43,162	1.29	14.5%
New Jersey	253	32,794	3.77	11.1%
Pennsylvania	113	21,352	1.62	7.2%
North Carolina	108	20,120	2.34	6.8%
Illinois	128	18,032	1.39	6.1%
Puerto Rico	61	17,896	9.69	6.0%
Indiana	47	17,141	2.68	5.8%

MEDICAL DEVICES and EQUIPMENT

Firms in the medical device and equipment subsector produce a variety of biomedical instruments and other health care products and supplies for diagnostics, surgery, patient care, and laboratories. The subsector is continually advancing the application of electronics and information technologies to improve and automate testing and patient care capabilities.

Examples of Products

- Bioimaging equipment
- Surgical supplies and instruments
- Orthopedic/prosthetic implants and devices
- Laser eye surgery instruments
- Automated external defibrillators (AEDs)
- Vascular stents and other implantable devices
- Dental instruments and orthodontics

Examples of Companies

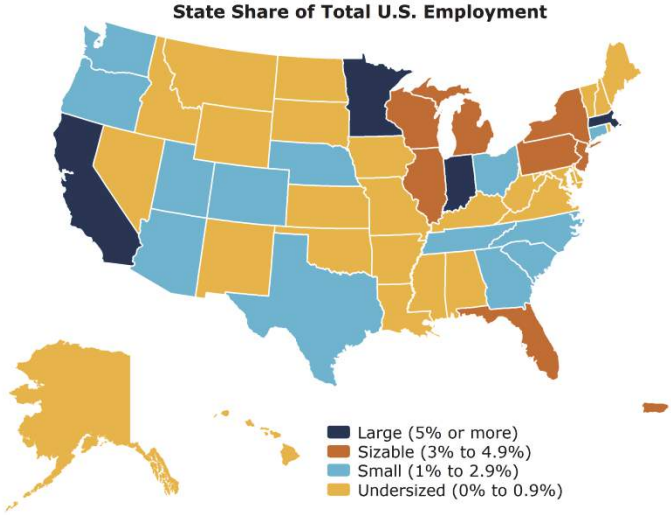
- Alcon
- Becton, Dickinson and Co.
- Boston Scientific Corp.
- GE Healthcare
- Medtronic
- Roche Group – Ventana
- Siemens Medical Solutions
- STERIS
- Stryker
- Zimmer
- 3M Health Care

States that are Both Large and Specialized*

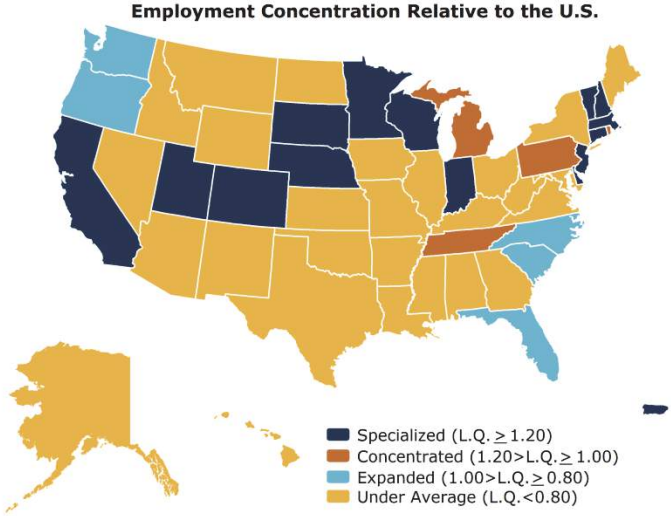
- California
- Minnesota
- Massachusetts
- Indiana

*States are listed in descending order by subsector employment levels.

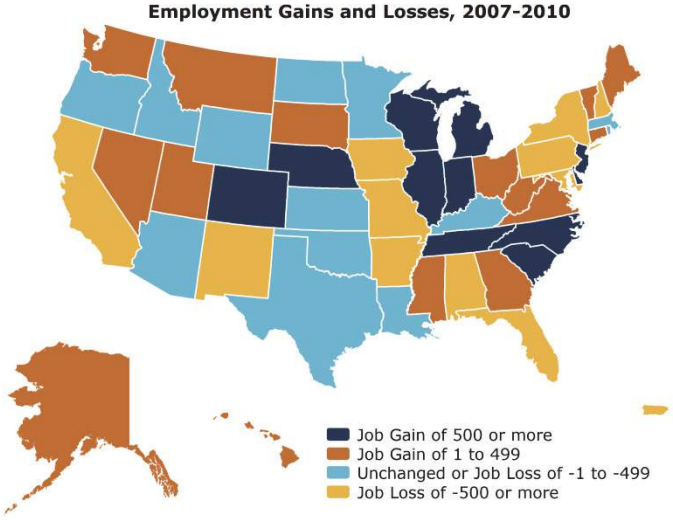
State Share of Total U.S. Employment



Employment Concentration Relative to the U.S.



Employment Gains and Losses, 2007-2010



Medical Devices & Equipment

U.S. medical device and equipment companies employed 343,468 in 2010 or 21 percent of the national bioscience sector. These advanced manufacturing jobs produce an array of medical devices, supplies, and equipment at nearly 7,000 individual establishments. The subsector entered the recession with momentum—from 2005 through the first year of the recession in 2008, the subsector steadily added jobs before decreasing by a modest 9,000 jobs or 2.6 percent over the 2008–2010 period. Looking out over the decade, medical devices has weathered relatively minor ups and downs in employment and ended 2010 essentially flat compared with 2001, down just 0.3 percent.

Most of the component industries within this subsector have seen job declines since peaking in 2008, with the steeper job losses in lab instruments and electromedical equipment manufacturing. However, one detailed industry gained jobs over this period—surgical and medical instrument manufacturers added jobs over the 2-year period.

State Leaders & Highlights

EMPLOYMENT SIZE: The industrial footprint of the medical device and equipment subsector is far-reaching with establishments in every state, the District of Columbia, and Puerto Rico. The top 10 employer states account for 61 percent of national subsector jobs.

- Large States: California, Minnesota, Massachusetts, Indiana
- Sizable States: Florida, Pennsylvania, New Jersey, New York, Puerto Rico, Illinois, Wisconsin, Michigan

EMPLOYMENT CONCENTRATION: Fourteen states and Puerto Rico have a specialized concentration of jobs in the medical device and equipment subsector.

- Specialized States: Puerto Rico, Minnesota, Utah, Delaware, Indiana, Massachusetts, Connecticut, South Dakota, Nebraska, Colorado, New Hampshire, California, Wisconsin, Vermont, New Jersey
- Concentrated States: Tennessee, Rhode Island, Pennsylvania, Michigan

EMPLOYMENT GROWTH: From 2007–10, 27 states experienced some increase in subsector jobs with 11 states having substantial increases led by Tennessee, Indiana, and Colorado.

LARGE and SPECIALIZED STATES: Four states have both a large employment base and a specialized concentration of jobs in medical devices and equipment (Table 6).

Table 6. States with Large and Specialized Employment in Medical Devices and Equipment, 2010

State	Establishments, 2010	Employment, 2010	Location Quotient, 2010	Share of U.S. Employment
California	995	59,450	1.54	17.3%
Minnesota	332	26,774	3.81	7.8%
Massachusetts	281	20,182	2.30	5.9%
Indiana	143	18,936	2.56	5.5%

Source: Battelle analysis of BLS, QCEW data; enhanced file from IMPLAN.

RESEARCH, TESTING, and MEDICAL LABORATORIES

The research, testing, and medical laboratories subsector includes a range of activities; from highly research-oriented companies working to develop and commercialize new drug discovery/delivery systems, and gene and cell therapies, to more service-oriented firms engaged in medical and other life sciences testing services.

Examples of Products

- Preclinical drug development
- Drug delivery systems
- Diagnostic imaging and testing
- Stem cell/regenerative research
- Biomarkers
- Research/laboratory support services

Examples of Companies

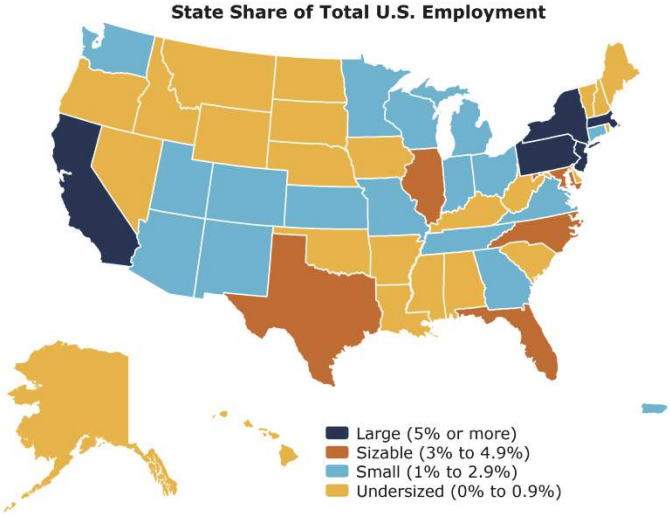
- Albany Molecular Research
- Celera
- Charles River Laboratories
- Covance
- Laboratory Corp. of America
- NeoGenomics
- Orchid Cellmark
- Pacific Biomarkers
- Pharmaceutical Product Development
- Quest Diagnostics

States that are Both Large and Specialized*

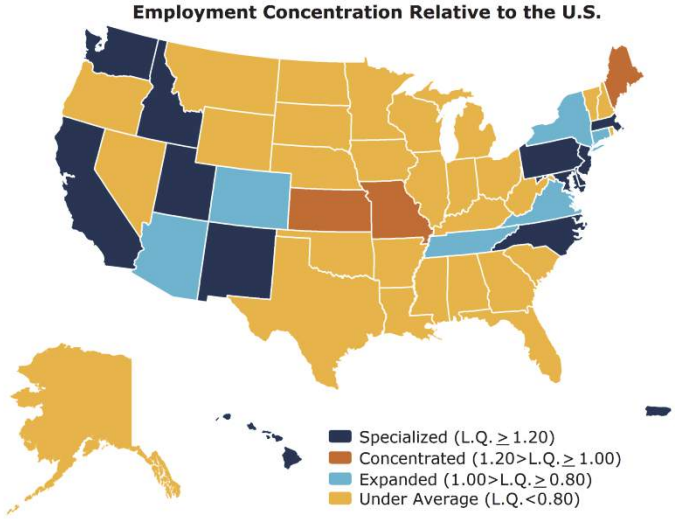
- California
- Massachusetts
- Pennsylvania
- New Jersey

*States are listed in descending order by subsector employment levels.

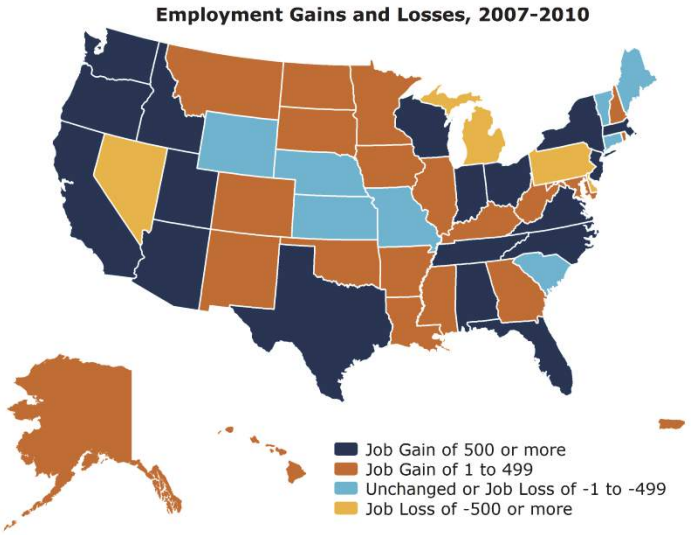
State Share of Total U.S. Employment



Employment Concentration Relative to the U.S.



Employment Gains and Losses, 2007-2010



Research, Testing, & Medical Laboratories

Research, testing, and medical laboratories continues to be the largest U.S. bioscience subsector and a source of steady and strong job gains. The subsector has few equals among all other industries in terms of its robust performance year after year through the turmoil of business cycles including the recent deep recession. In 2010, the subsector reached 451,923 jobs, or 28 percent of the biosciences, and spanned 22,212 individual establishments. Over the past decade, research, testing, and medical lab jobs have increased by 24 percent, translating into nearly 87,000 new jobs. The gains have continued, though moderated somewhat, through the recent recession, as the subsector added 6 percent to its employment base since 2007. The full 9-year period saw subsector firms add, on average, 2.4 percent in annual increases while the private sector average rate was flat. In the last three years, the subsector has averaged 2.0 percent in annual job gains and buoyed the overall biosciences during relatively difficult years.

The subsector is unique among the biosciences in a number of ways. Chiefly, companies classified within this subsector primarily focus on services, rather than production. Secondly, as these companies expand, they may "graduate" out of the subsector and into classification among drugs and pharmaceuticals if new therapeutics are developed.

Biotechnology and other life sciences R&D and testing lab establishments employ sixty five percent of the subsector. Both the R&D and the other major component, medical laboratories, have experienced strong overall growth since 2001, increasing by 19 percent and 30 percent, respectively.

State Leaders & Highlights

EMPLOYMENT SIZE: The largest of the bioscience subsectors, employment is widespread and growing. Similar to other subsectors, the 10 largest employer states account for 62 percent of all jobs.

- Large States: California, Massachusetts, Pennsylvania, New Jersey, New York
- Sizable States: Texas, Maryland, North Carolina, Florida, Illinois

EMPLOYMENT CONCENTRATION: Twelve states and Puerto Rico have a specialized concentration of jobs in the research, testing, and medical laboratories subsector.

- Specialized States: Massachusetts, Maryland, New Mexico, New Jersey, Puerto Rico, Idaho, California, Utah, North Carolina, Washington, Pennsylvania, Delaware, Hawaii
- Concentrated States: Maine, Kansas, Missouri

EMPLOYMENT GROWTH: From 2007–10, 39 states experienced some increase in subsector jobs with 18 states having substantial increases led by California and Massachusetts.

LARGE and SPECIALIZED STATES: Four states have both a large employment base and a specialized concentration of jobs in research, testing, and medical laboratories (Table 7).

Table 7. States with Large and Specialized Employment in Research, Testing, and Medical Labs, 2010

State	Establishments, 2010	Employment, 2010	Location Quotient, 2010	Share of U.S. Employment
California	2,986	75,907	1.49	16.8%
Massachusetts	1,154	37,789	3.27	8.4%
Pennsylvania	971	26,976	1.35	6.0%
New Jersey	896	26,721	2.01	5.9%

Source: Battelle analysis of BLS, QCEW data; enhanced file from IMPLAN.

BIOSCIENCE-RELATED DISTRIBUTION

The bioscience-related distribution subsector coordinates the delivery of bioscience-related products spanning pharmaceuticals, medical devices, and agbiosciences. The subsector increasingly deploys specialized technologies such as cold storage, highly regulated product monitoring, and automated drug distribution systems.

Examples of Services

Distribution of:

- Pharmaceuticals
- Vaccines
- Plasma/Blood
- Veterinary Medicines
- Surgical Instruments/Appliances
- Diagnostic Equipment
- Bioimaging Equipment
- Plant Seeds
- Agricultural Chemicals

Examples of Companies

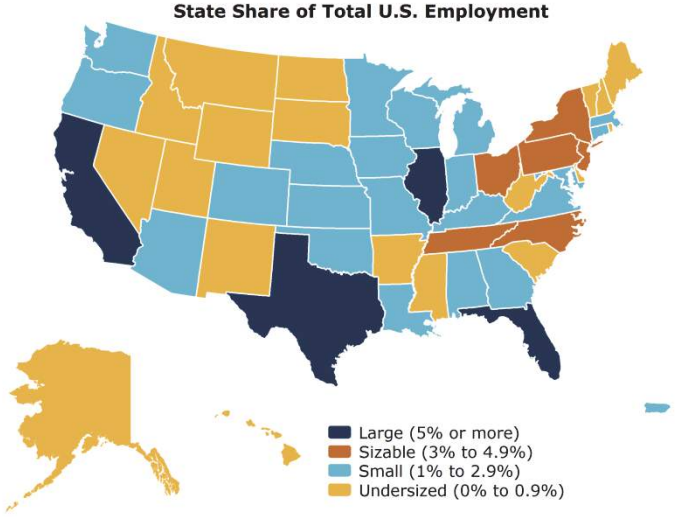
- Mckesson
- Cardinal Health
- AmerisourceBergen
- Monsanto
- Express Scripts/Medco Health
- Omnicare
- Wilbur-Ellis
- Owens & Minor
- Henry Schein
- Patterson Companies

States that are Both Large and Specialized*

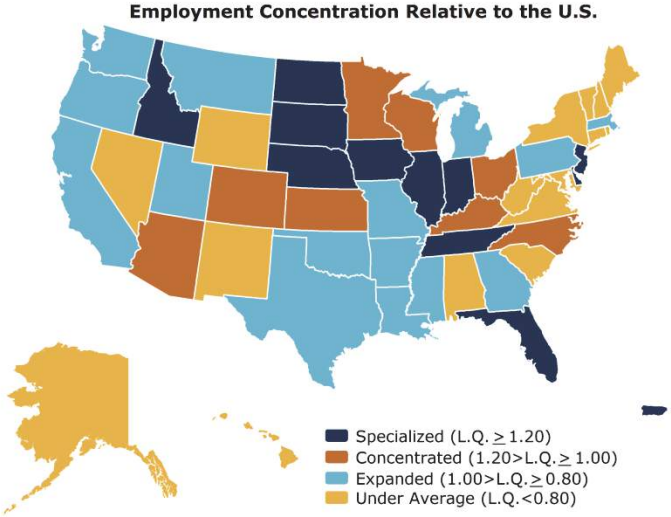
- Florida
- Illinois

*States are listed in descending order by subsector employment levels.

State Share of Total U.S. Employment



Employment Concentration Relative to the U.S.



Employment Gains and Losses, 2007-2010

Bioscience-Related Distribution

Companies engaged in the distribution of bioscience-related products deploy unique technologies and competencies in the logistics and transportation of biological products and other sensitive equipment. This subsector spans more than 36,000 establishments that employed 440,394 in 2010, accounting for 27 percent of total bioscience industry employment. Bioscience-related distribution steadily added jobs from 2002 through the economic peak in 2007, but was impacted by the recent recession with firms shedding some of these job gains as the recession took hold in 2008 and 2009 and was unable to fully rebound, with modest job losses again in 2010. Since 2007, jobs in this subsector have declined by 4.2 percent, a rate still below that of the overall private sector (-6.9 percent). Despite the recent contraction, employment overall is up since 2001 by nearly 25,000 jobs or 6 percent.

Three major components, each relatively distinct in its product focus, comprise the bioscience-related distribution sector—drugs and sundries; medical, dental, and hospital equipment and supplies; and farm supplies. Battelle has developed methodology to isolate only those pieces of each distinct component that most closely relate to biosciences, specifically, removing sundries from drugs distribution; and only including agricultural seeds and chemicals from farm supplies. Medical, dental, and hospital equipment is the largest individual component, accounting for 43 percent of subsector jobs and the sole source of the net job gains over the decade—the sector increased by 24 percent overall since 2001.

State Leaders & Highlights

EMPLOYMENT SIZE: Employment in the bioscience-distribution subsector is widely distributed with 12 states having a specialized concentration and eight others with a location quotient that is well concentrated. The top ten states in the subsector combine to employ just 54 percent.

- Large States: California, Florida, Texas, Illinois
- Sizable States: Ohio, New Jersey, Pennsylvania, New York, Tennessee, North Carolina

EMPLOYMENT CONCENTRATION: Eleven states and Puerto Rico have a specialized concentration of jobs in the bioscience-related distribution subsector.

- Specialized States: Puerto Rico, Iowa, North Dakota, Nebraska, Tennessee, South Dakota, Delaware, Idaho, Illinois, New Jersey, Florida, Indiana
- Concentrated States: Minnesota, Arizona, Wisconsin, Kansas, Ohio, Kentucky, North Carolina, Colorado

EMPLOYMENT GROWTH: From 2007–10, 13 states experienced some increase in subsector jobs with Texas and Arizona having substantial increases.

LARGE and SPECIALIZED STATES: Two states have both a large employment base and a specialized concentration of jobs in bioscience-related distribution (Table 8).

Table 8. States with Large and Specialized Employment in Bioscience-Related Distribution, 2010

State	Establishments, 2010	Employment, 2010	Location Quotient, 2010	Share of U.S. Employment
Florida	2,982	34,514	1.39	7.8%
Illinois	2,006	26,869	1.39	6.1%

Source: Battelle analysis of BLS, QCEW data; enhanced file from IMPLAN.

Industry Summary and Conclusion

The national bioscience sector, while not immune from cyclical impacts and the recent global recession, is a proven generator of quality, high-wage jobs. During the severe economic downturn of the late 2000s, the industry maintained a relatively steady position with modest job losses while other comparable knowledge-based industries and the overall private sector significantly lost their footing. By 2010, the early stage of the recovery found the biosciences leveling off and two of its five major subsectors again adding jobs. Total employment reached 1.61 million jobs with firms operating just over 70,000 establishments. Research, testing, and medical lab companies have continued to be the steady source of job growth even through the recession.

By 2010, the early stage of the recovery found the biosciences leveling off and two of its five major subsectors again adding jobs.

The biosciences represent an economic development opportunity for all states and regions across diverse markets. Each of the 50 states, the District of Columbia, and Puerto Rico have a presence in the bioscience industry, with a majority of states claiming at least one niche strength as indicated by a subsector specialization.

Highlights from the state-by-state industry employment analysis include:

- In employment concentration, 34 states and Puerto Rico have an employment specialization in at least one of the five major bioscience subsectors. Remarkably, 18 states and Puerto Rico are specialized in two or more subsectors, suggesting clear spillover impacts into multiple areas of industry focus from this knowledge-based industry cluster. Indiana, New Jersey, and Puerto Rico have a specialization in four of the five subsectors, representing truly diverse strengths across the entire industry. No state is specialized in all five areas.
- In size, 12 states and Puerto Rico have a large employment base (5 percent or more of national employment) in at least one subsector. Nine of those states—California, Illinois, Indiana, Florida, Massachusetts, New Jersey, New York, Pennsylvania, and Texas—have a large base in at least two subsectors. Just three of those—California, Illinois, and Indiana—have a large job base in three or more subsectors with California a large state in four of the five major subsectors.
- Despite the difficult recession years, 22 states added jobs to their overall bioscience industry from 2007 through 2010 demonstrating the continued strength and resiliency of the industry.

Appendix: Data & Methodology

Industry Employment, Establishments, and Wages

The bioscience industry employment analysis in this report examines national and state data and corresponding trends in the biosciences from 2001 through 2010. For employment analysis, Battelle used the Bureau of Labor Statistics (BLS) Quarterly Census of Employment and Wages (QCEW) data. The QCEW data (formerly known as the ES-202 program) provide the most current, detailed industry employment, establishment, and wage figures available at both a national and subnational level. Battelle receives an enhanced version of these data from a private vendor, the Minnesota IMPLAN Group, Inc.

The QCEW program is a cooperative program involving BLS and the State Employment Security Agencies (SESAs). The QCEW program produces a comprehensive tabulation of employment and wage information for workers covered by state unemployment insurance (UI) laws and federal workers covered by the Unemployment Compensation for Federal Employees (UCFE) program. Publicly available files include data on the number of establishments, monthly employment, and quarterly wages, by NAICS (North American Industry Classification System) industry, by county, and by ownership sector, for the entire United States. These data are aggregated to annual levels, to higher industry levels (NAICS industry groups, sectors, and supersectors), and to higher geographic levels (national, state, and metropolitan statistical area [MSA]).

Since 2001, the QCEW has been producing and publishing data according to the NAICS. Federal statistical agencies have a mandate to publish industry data according to this improved classification system. Compared with the prior classification system—the 1987 Standard Industrial Classification (SIC) system, NAICS better incorporates new and emerging industries. Employment, establishment, and wage data produced by the QCEW program for 2001 to present are not comparable with SIC-based industry data from prior years. This limits the ability to construct a longer time series for data analysis; however, 10 years of NAICS-based data (2001-2010) are now available.

Twenty-five NAICS industries at the most detailed (6-digit) level make up the updated Battelle definition of the biosciences and its subsectors. These detailed industries are aggregated up to five major subsectors of the bioscience industry. Four of the detailed NAICS industries, Testing Laboratories (NAICS 541380); R&D in the Physical, Engineering, and Life Sciences (NAICS 54171); Drug and Druggists' Sundries Merchant Wholesalers (NAICS 424210); and Farm Supplies Merchant Wholesalers (NAICS 424910) are adjusted in this analysis by Battelle to include only the share of these industries directly involved in biological or other life science activities. To isolate these relevant life science components, Battelle used information and data from the U.S. Census Bureau's Economic Census.

Much more than other sectors, the biosciences are dynamic and evolve with the latest research and scientific discoveries with tremendous widespread impact on food, medicine, and the environment. In light of this substantive evolvement as well as the nature in which the North American Industry Classification System (NAICS) has also evolved in its interpretation and use by companies as well as state and federal statistical systems, Battelle and BIO have worked to re-examine and re-evaluate the NAICS-based definition used in this report.

The updated NAICS definition of the bioscience industry is presented in figure A-1 along with a crosswalk to show the changes made from prior Battelle-BIO reports.

Figure A-1. The Bioscience Industry, Revised for 2012

NAICS Code	NAICS Description	Included in Prior Battelle-BIO Definition	Included in Updated Industry Definition, 2012
AGRICULTURAL FEEDSTOCK & CHEMICALS			
311221	Wet Corn Milling	●	●
311222	Soybean Processing	●	●
311223	Other Oilseed Processing	●	●
325193	Ethyl Alcohol Manufacturing	●	●
325199	All Other Basic Organic Chemical Manufacturing	●	
325221	Cellulosic Organic Fiber Manufacturing	●	●
325311	Nitrogenous Fertilizer Manufacturing	●	●
325312	Phosphatic Fertilizer Manufacturing	●	●
325314	Fertilizer (Mixing Only) Manufacturing	●	●
325320	Pesticide and Other Agricultural Chemical Manufacturing	●	●
DRUGS & PHARMACEUTICALS			
325411	Medicinal and Botanical Manufacturing	●	●
325412	Pharmaceutical Preparation Manufacturing	●	●
325413	In-Vitro Diagnostic Substance Manufacturing	●	●
325414	Biological Product (except Diagnostic) Manufacturing	●	●
MEDICAL DEVICES & EQUIPMENT			
334510	Electromedical and Electrotherapeutic Apparatus Manufacturing	●	●
334516	Analytical Laboratory Instrument Manufacturing	●	●
334517	Irradiation Apparatus Manufacturing	●	●
339112	Surgical and Medical Instrument Manufacturing	●	●
339113	Surgical Appliance and Supplies Manufacturing	●	●
339114	Dental Equipment and Supplies Manufacturing	●	●
339115	Ophthalmic Goods Manufacturing	●	
339116	Dental Laboratories	●	
RESEARCH, TESTING, & MEDICAL LABORATORIES			
541380*	Testing Laboratories	●	●
54171*	Research and Development in the Physical, Engineering, and Life Sciences	●	●
621511	Medical Laboratories	●	●
621512	Diagnostic Imaging Centers	●	
BIOSCIENCE-RELATED DISTRIBUTION			
423450	Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers		●
424210*	Drugs and Druggists' Sundries Merchant Wholesalers		●
424910*	Farm Supplies Merchant Wholesalers		●

*Includes only the portion of these industries engaged in relevant life science activities.

National and state data were tabulated and presented in both summary analytical and state profile tables in the following section of the report. Data for Puerto Rico and the District of Columbia are included in this report at both the "state" and national level. U.S. employment, establishment, and wage totals in this report reflect the sum of all state data and include both Puerto Rico and DC. All state and DC data are from the Minnesota IMPLAN Group; data for Puerto Rico are directly from BLS.

For more information on the BLS Quarterly Census of Employment and Wages, see http://www.bls.gov/cew/home.htm.

Employment multipliers from the Bureau of Economic Analysis (BEA) were used to estimate the employment impact on all other industries of adding bioscience jobs at both the state and national levels. BEA's Regional Input-Output Modeling System (RIMS II) is based on an Input-Output (I-O) table in an accounting framework. I-O tables are calculated for each industry and show the distribution of inputs purchased and outputs sold. These tables are derived from two major data sources: BEA's national I-O table for almost 500 U.S. industries and BEA's regional economic accounts used to adjust the data for a region's industrial structure and trading patterns. It is important to note that, like all impact models, RIMS provides an approximate order-of-magnitude estimate of impacts, and the multipliers are best used to estimate impacts of small changes on a regional economy.

National employment impact analysis in this report is no longer comparable with that from prior editions due to both a change in the industry definition as well as changes in BEA methodology. BEA no longer calculates employment multipliers at the national level which had included interstate activity; therefore, the U.S. multipliers presented here for the bioscience industry are lower and no longer comparable with those from prior Battelle/BIO reports.

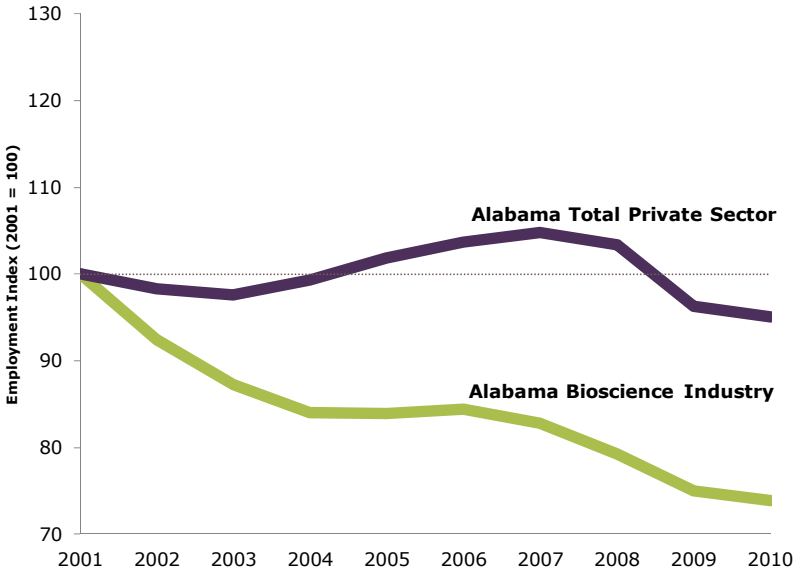
Multipliers and the resulting employment impacts are shown in each state profile table, for each major bioscience subsector. BEA does not provide employment multipliers for Puerto Rico.

For more information on the Bureau of Economic Analysis RIMS II Multipliers, see http://www.bea.gov/regional/rims/index.cfm.

In the time series analysis of earnings estimates in this report, the Consumer Price Index for All Urban Consumers (CPI-U) was used to adjust for inflation. The Consumer Price Index is a measure of the average change in prices over time of goods and services purchased by households.

Bioscience Industry State Profiles

ALABAMA • Alabama employs nearly 12,000 in the biosciences across more than 600 individual establishments. The state has a specialized employment concentration in the agricultural feedstock and chemicals subsector with 39 percent more jobs in the agbiosciences relative to its private sector compared with the national average in 2010 (location quotient of 1.39).



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Alabama	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	11,945	1,605,533	III
Bioscience Industry Location Quotient	0.55	n/a	IV
Biosciences Industry Establishments	607	70,006	IV

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Alabama Highlights:

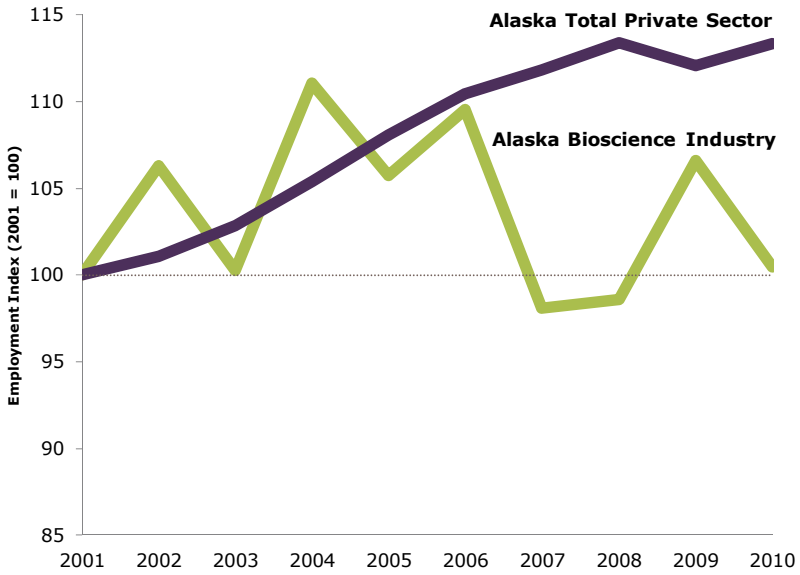
INDUSTRY SUBSECTOR	Alabama			United States		
	2010	2001–10 Change	2007–10 Change	2010	2001–10 Change	2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	26	-26.2%	-7.1%	1,760	2.2%	4.5%
Employment	1,374	-53.0%	-29.9%	72,988	-5.9%	-5.5%
Location Quotient	1.39			n/a		
Direct-Effect Employment Multiplier	5.1			5.6		
Total Employment Impact	7,027			405,197		
Average Annual Wage (constant 2010 dollars)	$70,606	-1.0%	0.5%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	15	15.4%	-6.3%	2,908	11.3%	6.5%
Employment	993	246.0%	40.9%	296,759	-3.1%	-7.0%
Location Quotient	0.25			n/a		
Direct-Effect Employment Multiplier	2.9			5.3		
Total Employment Impact	2,922			1,464,492		
Average Annual Wage (constant 2010 dollars)	$56,014	12.6%	12.0%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	49	-13.1%	0.0%	6,957	11.7%	7.7%
Employment	1,440	-29.9%	-31.5%	343,468	-0.3%	-0.8%
Location Quotient	0.31			n/a		
Direct-Effect Employment Multiplier	2.1			2.9		
Total Employment Impact	2,956			956,767		
Average Annual Wage (constant 2010 dollars)	$44,619	5.6%	0.4%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	193	30.4%	9.1%	22,212	48.9%	20.1%
Employment	3,751	-8.7%	21.8%	451,923	23.8%	6.1%
Location Quotient	0.61			n/a		
Direct-Effect Employment Multiplier	2.4			2.6		
Total Employment Impact	9,091			1,178,741		
Average Annual Wage (constant 2010 dollars)	$65,107	9.5%	4.7%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	324	-45.7%	-24.4%	36,170	-1.1%	-0.3%
Employment	4,387	-35.5%	-21.0%	440,394	6.0%	-4.2%
Location Quotient	0.74			n/a		
Direct-Effect Employment Multiplier	2.2			2.4		
Total Employment Impact Multiplier	9,848			1,046,594		
Average Annual Wage (constant 2010 dollars)	$74,177	17.2%	3.8%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	607	-28.5%	-13.1%	70,006	12.8%	6.7%
Employment	11,945	-26.2%	-10.9%	1,605,533	6.4%	-1.4%
Location Quotient	0.55			n/a		
Direct-Effect Employment Multiplier	2.7			3.2		
Total Employment Impact	31,844			5,051,791		
Average Annual Wage (constant 2010 dollars)	$65,845	8.2%	3.2%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	109,932	3.3%	-3.1%	8,752,494	12.5%	0.1%
Employment	1,443,743	-5.0%	-9.3%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$47,137	8.0%	1.9%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

ALASKA • Alaska's bioscience industry employs more than 700 spanning 107 individual establishments. The state subsector with the largest employment is research, testing, and medical laboratories with just over 300 jobs in 2010. While the industry is modest in size, it has experienced job growth in recent years and pays average wages significantly above those for the overall private sector.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Alaska	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	735	1,605,533	V
Bioscience Industry Location Quotient	0.21	n/a	V
Biosciences Industry Establishments	107	70,006	V

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Alaska Highlights:

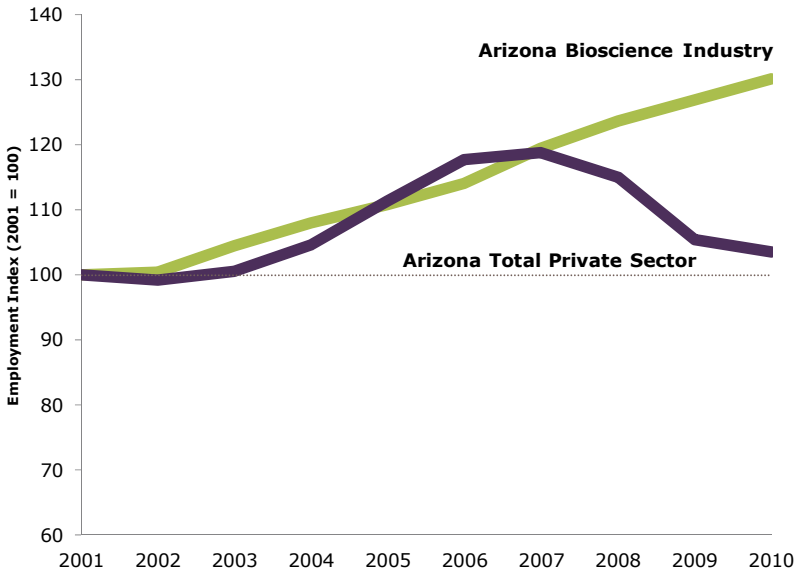
INDUSTRY SUBSECTOR	Alaska			United States		
	2010	2001–10 Change	2007–10 Change	2010	2001–10 Change	2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	3	17.9%	200.0%	1,760	2.2%	4.5%
Employment	26	-89.8%	64.5%	72,988	-5.9%	-5.5%
Location Quotient	0.16			n/a		
Direct-Effect Employment Multiplier	4.2			5.6		
Total Employment Impact	108			405,197		
Average Annual Wage (constant 2010 dollars)	$75,762	-10.4%	-13.0%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	0	-100.0%	-100.0%	2,908	11.3%	6.5%
Employment	0	-100.0%	-100.0%	296,759	-3.1%	-7.0%
Location Quotient	0.00			n/a		
Direct-Effect Employment Multiplier	0.0			5.3		
Total Employment Impact	0			1,464,492		
Average Annual Wage (constant 2010 dollars)	$0	-100.0%	-100.0%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	11	450.0%	57.1%	6,957	11.7%	7.7%
Employment	71	1805.9%	27.8%	343,468	-0.3%	-0.8%
Location Quotient	0.09			n/a		
Direct-Effect Employment Multiplier	1.3			2.9		
Total Employment Impact	94			956,767		
Average Annual Wage (constant 2010 dollars)	$73,836	53.8%	4.5%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	52	98.3%	18.1%	22,212	48.9%	20.1%
Employment	324	39.7%	17.8%	451,923	23.8%	6.1%
Location Quotient	0.32			n/a		
Direct-Effect Employment Multiplier	1.8			2.6		
Total Employment Impact	573			1,178,741		
Average Annual Wage (constant 2010 dollars)	$50,107	-6.2%	0.6%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	41	22.3%	26.1%	36,170	-1.1%	-0.3%
Employment	314	29.8%	-1.5%	440,394	6.0%	-4.2%
Location Quotient	0.32			n/a		
Direct-Effect Employment Multiplier	1.8			2.4		
Total Employment Impact Multiplier	550			1,046,594		
Average Annual Wage (constant 2010 dollars)	$58,421	0.8%	7.6%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	107	64.9%	25.1%	70,006	12.8%	6.7%
Employment	735	0.5%	2.4%	1,605,533	6.4%	-1.4%
Location Quotient	0.21			n/a		
Direct-Effect Employment Multiplier	1.8			3.2		
Total Employment Impact	1,324			5,051,791		
Average Annual Wage (constant 2010 dollars)	$56,862	-13.5%	-5.2%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	19,212	9.5%	0.6%	8,752,494	12.5%	0.1%
Employment	237,543	13.3%	1.4%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$39,267	9.4%	4.2%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

ARIZONA • Arizona's bioscience industry continues to grow at a rapid rate. Industry firms have increased employment by 30 percent overall since 2001 and have even added jobs since 2007, a period which includes the deep national recession. These growth rates continue to outpace those for the national bioscience sector. Since 2001, all five major subsectors have experienced net job growth in the state, led by research, testing, and medical labs which has grown its employment base by more than 50 percent since 2001. The state is well concentrated in bioscience-related distribution with a location quotient of 1.10.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Arizona	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	21,084	1,605,533	III
Bioscience Industry Location Quotient	0.72	n/a	IV
Biosciences Industry Establishments	1,219	70,006	III

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Arizona Highlights:

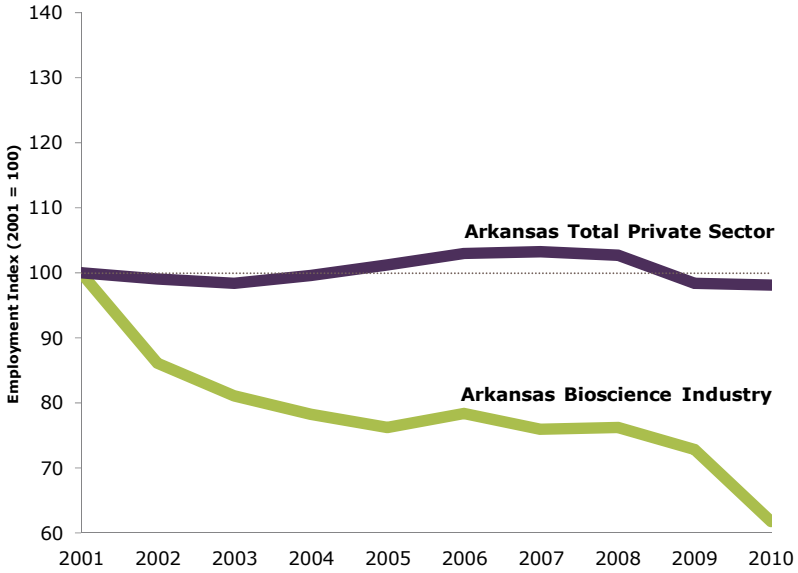
INDUSTRY SUBSECTOR	Arizona 2010	Arizona 2001–10 Change	Arizona 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	18	-39.1%	5.9%	1,760	2.2%	4.5%
Employment	538	2.7%	-2.7%	72,988	-5.9%	-5.5%
Location Quotient	0.40			n/a		
Direct-Effect Employment Multiplier	3.9			5.6		
Total Employment Impact	2,072			405,197		
Average Annual Wage (constant 2010 dollars)	$44,801	17.2%	5.9%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	38	35.7%	5.6%	2,908	11.3%	6.5%
Employment	1,181	5.0%	6.6%	296,759	-3.1%	-7.0%
Location Quotient	0.22			n/a		
Direct-Effect Employment Multiplier	3.3			5.3		
Total Employment Impact	3,842			1,464,492		
Average Annual Wage (constant 2010 dollars)	$49,788	-11.2%	-24.3%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	90	3.9%	-4.3%	6,957	11.7%	7.7%
Employment	3,890	25.8%	-0.4%	343,468	-0.3%	-0.8%
Location Quotient	0.62			n/a		
Direct-Effect Employment Multiplier	2.3			2.9		
Total Employment Impact	8,913			956,767		
Average Annual Wage (constant 2010 dollars)	$62,010	13.3%	6.1%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	319	46.3%	23.2%	22,212	48.9%	20.1%
Employment	6,613	53.3%	19.4%	451,923	23.8%	6.1%
Location Quotient	0.80			n/a		
Direct-Effect Employment Multiplier	2.2			2.6		
Total Employment Impact	14,755			1,178,741		
Average Annual Wage (constant 2010 dollars)	$60,751	11.3%	-0.5%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	754	-20.1%	-10.0%	36,170	-1.1%	-0.3%
Employment	8,862	24.0%	7.3%	440,394	6.0%	-4.2%
Location Quotient	1.10			n/a		
Direct-Effect Employment Multiplier	2.3			2.4		
Total Employment Impact Multiplier	20,606			1,046,594		
Average Annual Wage (constant 2010 dollars)	$87,671	20.2%	-18.6%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	1,219	-6.6%	-2.0%	70,006	12.8%	6.7%
Employment	21,084	30.1%	8.9%	1,605,533	6.4%	-1.4%
Location Quotient	0.72			n/a		
Direct-Effect Employment Multiplier	2.4			3.2		
Total Employment Impact	50,187			5,051,791		
Average Annual Wage (constant 2010 dollars)	$71,277	14.5%	-11.1%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	142,619	21.9%	-8.8%	8,752,494	12.5%	0.1%
Employment	1,958,224	3.5%	-12.9%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$35,702	5.0%	-0.7%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

ARKANSAS • Arkansas' bioscience industry employs more than 6,200 across 618 individual business establishments. Two of the five major industry subsectors have experienced job growth in recent years—drugs and pharmaceuticals which has a small base in the state but has added jobs; and research, testing, and medical labs which represents nearly 1,200 jobs and has grown by 14 percent overall since 2001.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Arkansas	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	6,223	1,605,533	IV
Bioscience Industry Location Quotient	0.45	n/a	V
Biosciences Industry Establishments	618	70,006	IV

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Arkansas Highlights:

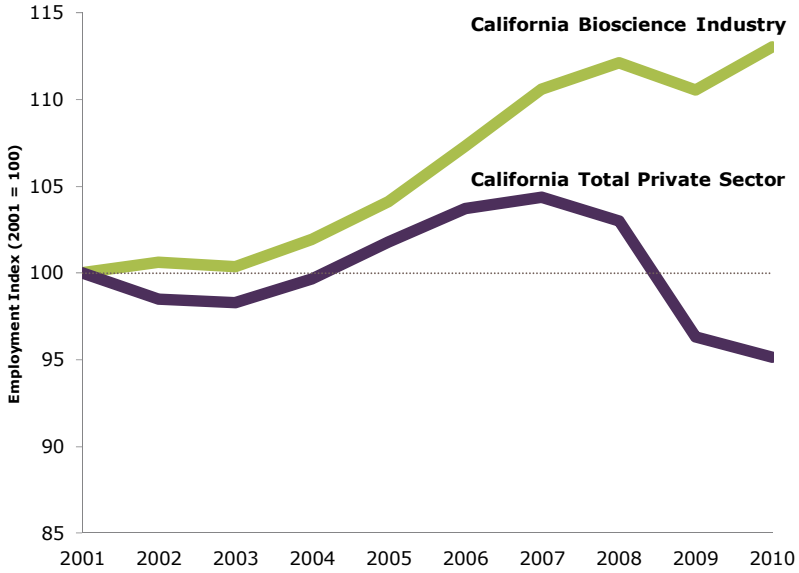
INDUSTRY SUBSECTOR	Arkansas 2010	Arkansas 2001–10 Change	Arkansas 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	21	-38.5%	-19.2%	1,760	2.2%	4.5%
Employment	517	-62.6%	-32.2%	72,988	-5.9%	-5.5%
Location Quotient	0.82			n/a		
Direct-Effect Employment Multiplier	5.2			5.6		
Total Employment Impact	2,670			405,197		
Average Annual Wage (constant 2010 dollars)	$53,375	9.9%	14.4%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	13	85.7%	-18.8%	2,908	11.3%	6.5%
Employment	173	63.2%	21.8%	296,759	-3.1%	-7.0%
Location Quotient	0.07			n/a		
Direct-Effect Employment Multiplier	2.7			5.3		
Total Employment Impact	460			1,464,492		
Average Annual Wage (constant 2010 dollars)	$42,823	20.9%	14.1%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	34	1.4%	-12.8%	6,957	11.7%	7.7%
Employment	608	-81.9%	-63.9%	343,468	-0.3%	-0.8%
Location Quotient	0.20			n/a		
Direct-Effect Employment Multiplier	1.8			2.9		
Total Employment Impact	1,103			956,767		
Average Annual Wage (constant 2010 dollars)	$46,899	30.7%	20.3%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	121	35.1%	21.4%	22,212	48.9%	20.1%
Employment	1,196	14.4%	4.4%	451,923	23.8%	6.1%
Location Quotient	0.31			n/a		
Direct-Effect Employment Multiplier	1.8			2.6		
Total Employment Impact	2,175			1,178,741		
Average Annual Wage (constant 2010 dollars)	$54,330	17.4%	7.7%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	429	-0.1%	5.4%	36,170	-1.1%	-0.3%
Employment	3,728	-10.6%	-4.5%	440,394	6.0%	-4.2%
Location Quotient	0.98			n/a		
Direct-Effect Employment Multiplier	2.0			2.4		
Total Employment Impact Multiplier	7,625			1,046,594		
Average Annual Wage (constant 2010 dollars)	$45,733	15.2%	4.9%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	618	4.1%	5.2%	70,006	12.8%	6.7%
Employment	6,223	-38.2%	-18.6%	1,605,533	6.4%	-1.4%
Location Quotient	0.45			n/a		
Direct-Effect Employment Multiplier	2.3			3.2		
Total Employment Impact	14,034			5,051,791		
Average Annual Wage (constant 2010 dollars)	$48,054	19.3%	9.7%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	80,779	17.5%	2.6%	8,752,494	12.5%	0.1%
Employment	928,309	-1.8%	-4.9%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$42,858	7.7%	0.7%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

CALIFORNIA • California has the largest state bioscience employment base with more than 228,000 jobs, a figure which has steadily grown and outpaced the nation. The state has a specialized concentration of jobs in three of the five major bioscience subsectors and in the industry overall (bioscience location quotient of 1.26). Its largest subsector—research, testing, and medical labs, has increased employment by 36 percent since 2001 and maintained strong job growth even during the recent recession years.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	California	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	228,700	1,605,533	I
Bioscience Industry Location Quotient	1.26	n/a	I
Biosciences Industry Establishments	7,468	70,006	I

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

California Highlights:

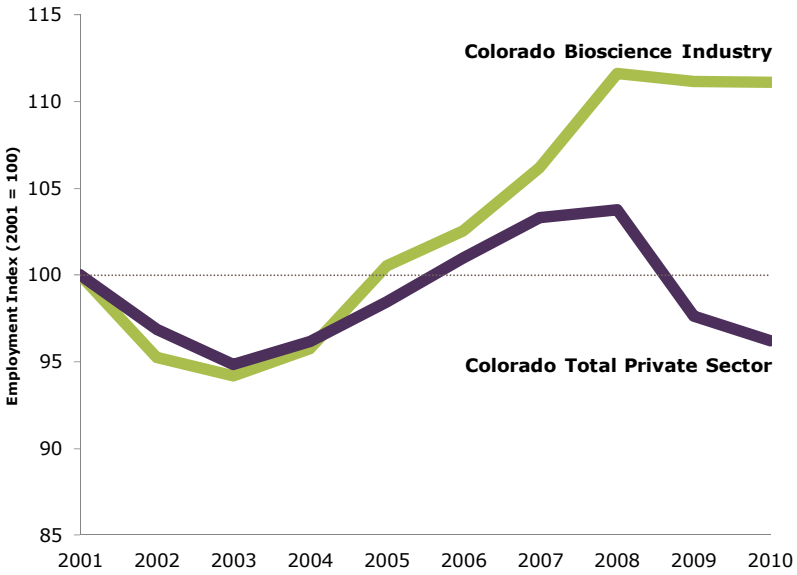
INDUSTRY SUBSECTOR	California 2010	California 2001–10 Change	California 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	126	-26.0%	-4.5%	1,760	2.2%	4.5%
Employment	2,645	-31.6%	-11.2%	72,988	-5.9%	-5.5%
Location Quotient	0.32			n/a		
Direct-Effect Employment Multiplier	4.3			5.6		
Total Employment Impact	11,247			405,197		
Average Annual Wage (constant 2010 dollars)	$58,748	16.1%	5.0%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	466	7.9%	19.5%	2,908	11.3%	6.5%
Employment	43,162	10.2%	-1.8%	296,759	-3.1%	-7.0%
Location Quotient	1.29			n/a		
Direct-Effect Employment Multiplier	5.9			5.3		
Total Employment Impact	256,362			1,464,492		
Average Annual Wage (constant 2010 dollars)	$114,273	14.0%	-1.5%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	995	-11.8%	3.3%	6,957	11.7%	7.7%
Employment	59,450	-7.1%	-2.5%	343,468	-0.3%	-0.8%
Location Quotient	1.54			n/a		
Direct-Effect Employment Multiplier	3.3			2.9		
Total Employment Impact	194,392			956,767		
Average Annual Wage (constant 2010 dollars)	$88,843	13.6%	-2.4%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	2,986	44.5%	18.4%	22,212	48.9%	20.1%
Employment	75,907	36.3%	13.8%	451,923	23.8%	6.1%
Location Quotient	1.49			n/a		
Direct-Effect Employment Multiplier	3.0			2.6		
Total Employment Impact	226,607			1,178,741		
Average Annual Wage (constant 2010 dollars)	$102,451	18.1%	4.4%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	2,895	15.7%	6.0%	36,170	-1.1%	-0.3%
Employment	47,535	19.9%	-3.5%	440,394	6.0%	-4.2%
Location Quotient	0.96			n/a		
Direct-Effect Employment Multiplier	2.5			2.4		
Total Employment Impact Multiplier	116,813			1,046,594		
Average Annual Wage (constant 2010 dollars)	$84,760	10.3%	-4.1%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	7,468	18.6%	10.8%	70,006	12.8%	6.7%
Employment	228,700	13.0%	2.2%	1,605,533	6.4%	-1.4%
Location Quotient	1.26			n/a		
Direct-Effect Employment Multiplier	3.5			3.2		
Total Employment Impact	805,421			5,051,791		
Average Annual Wage (constant 2010 dollars)	$96,962	15.4%	-0.1%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	1,301,372	25.6%	3.0%	8,752,494	12.5%	0.1%
Employment	12,047,390	-4.9%	-8.9%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$52,536	4.1%	0.0%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

COLORADO • Colorado's bioscience industry is large and has outpaced national growth since 2001 by continuing to add jobs overall since 2007. Its companies employ nearly 27,000 with the large and highly specialized state medical device and equipment subsector growing by 16 percent since 2001. Job growth in research, testing, and medical labs has also driven overall sector growth since 2001.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Colorado	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	26,830	1,605,533	II
Bioscience Industry Location Quotient	0.99	n/a	II
Biosciences Industry Establishments	1,519	70,006	II

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Colorado Highlights:

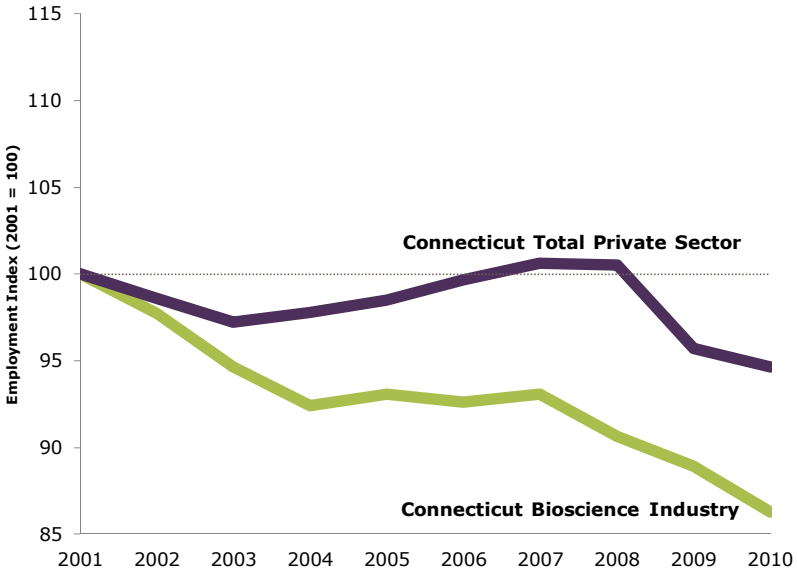
INDUSTRY SUBSECTOR	Colorado 2010	Colorado 2001–10 Change	Colorado 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	27	59.0%	28.6%	1,760	2.2%	4.5%
Employment	388	46.9%	15.6%	72,988	-5.9%	-5.5%
Location Quotient	0.32			n/a		
Direct-Effect Employment Multiplier	4.7			5.6		
Total Employment Impact	1,845			405,197		
Average Annual Wage (constant 2010 dollars)	$54,990	11.9%	-8.8%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	48	-11.1%	-9.4%	2,908	11.3%	6.5%
Employment	2,930	-0.5%	-5.5%	296,759	-3.1%	-7.0%
Location Quotient	0.59			n/a		
Direct-Effect Employment Multiplier	5.5			5.3		
Total Employment Impact	16,124			1,464,492		
Average Annual Wage (constant 2010 dollars)	$87,196	18.7%	5.9%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	154	19.5%	-1.3%	6,957	11.7%	7.7%
Employment	9,138	16.1%	14.7%	343,468	-0.3%	-0.8%
Location Quotient	1.58			n/a		
Direct-Effect Employment Multiplier	3.0			2.9		
Total Employment Impact	26,958			956,767		
Average Annual Wage (constant 2010 dollars)	$69,988	23.8%	-0.9%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	512	65.5%	11.6%	22,212	48.9%	20.1%
Employment	6,853	23.0%	1.9%	451,923	23.8%	6.1%
Location Quotient	0.90			n/a		
Direct-Effect Employment Multiplier	3.1			2.6		
Total Employment Impact	20,913			1,178,741		
Average Annual Wage (constant 2010 dollars)	$86,471	10.3%	-8.9%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	778	-26.0%	-5.1%	36,170	-1.1%	-0.3%
Employment	7,521	0.3%	0.1%	440,394	6.0%	-4.2%
Location Quotient	1.01			n/a		
Direct-Effect Employment Multiplier	2.6			2.4		
Total Employment Impact Multiplier	19,791			1,046,594		
Average Annual Wage (constant 2010 dollars)	$88,486	20.8%	-3.0%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	1,519	-2.6%	0.7%	70,006	12.8%	6.7%
Employment	26,830	11.1%	4.6%	1,605,533	6.4%	-1.4%
Location Quotient	0.99			n/a		
Direct-Effect Employment Multiplier	3.2			3.2		
Total Employment Impact	85,631			5,051,791		
Average Annual Wage (constant 2010 dollars)	$81,046	17.9%	-3.9%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	168,177	11.3%	-4.1%	8,752,494	12.5%	0.1%
Employment	1,802,104	-3.8%	-6.8%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$47,917	1.8%	-0.2%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

CONNECTICUT • Connecticut has a specialized concentration of jobs in the overall bioscience industry and two of the five major subsectors—medical devices and equipment (location quotient of 1.98) and drugs and pharmaceuticals (location quotient of 1.92). Though the state sector has contracted overall since 2001, its medical device subsector has experienced 2 percent job growth since 2001 and has even grown in recent years, despite the economic downturn.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Connecticut	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	25,650	1,605,533	III
Bioscience Industry Location Quotient	1.26	n/a	II
* Biosciences Industry Establishments	868	70,006	III

S
State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Connecticut Highlights:

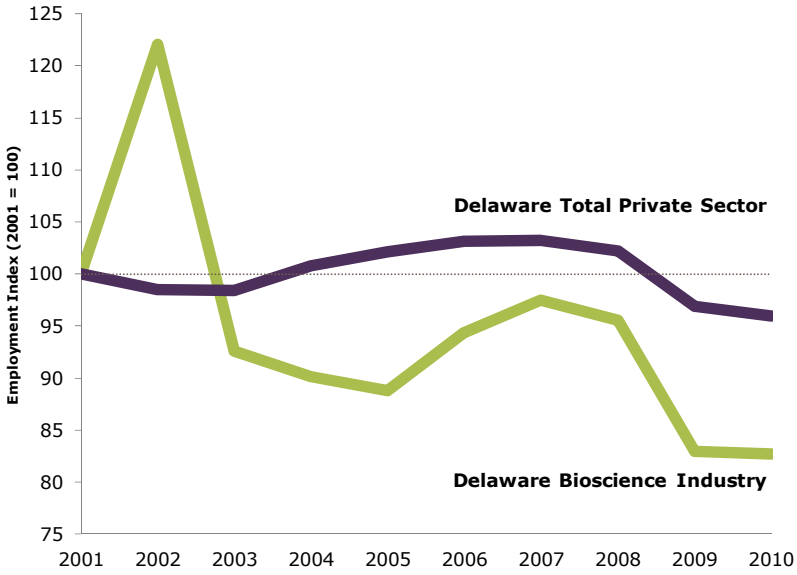
INDUSTRY SUBSECTOR	Connecticut 2010	Connecticut 2001–10 Change	Connecticut 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	10	-44.4%	-9.1%	1,760	2.2%	4.5%
Employment	316	17.8%	19.8%	72,988	-5.9%	-5.5%
Location Quotient	0.34			n/a		
Direct-Effect Employment Multiplier	3.7			5.6		
Total Employment Impact	1,158			405,197		
Average Annual Wage (constant 2010 dollars)	$62,845	-54.9%	-8.2%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	36	24.1%	2.9%	2,908	11.3%	6.5%
Employment	7,225	-33.1%	-18.1%	296,759	-3.1%	-7.0%
Location Quotient	1.92			n/a		
Direct-Effect Employment Multiplier	5.2			5.3		
Total Employment Impact	37,643			1,464,492		
Average Annual Wage (constant 2010 dollars)	$135,434	13.3%	4.2%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	134	0.8%	-4.3%	6,957	11.7%	7.7%
Employment	8,598	2.1%	1.6%	343,468	-0.3%	-0.8%
Location Quotient	1.98			n/a		
Direct-Effect Employment Multiplier	2.6			2.9		
Total Employment Impact	22,496			956,767		
Average Annual Wage (constant 2010 dollars)	$67,677	-12.6%	9.0%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	366	22.2%	12.8%	22,212	48.9%	20.1%
Employment	5,092	-9.5%	-3.4%	451,923	23.8%	6.1%
Location Quotient	0.89			n/a		
Direct-Effect Employment Multiplier	2.5			2.6		
Total Employment Impact	12,636			1,178,741		
Average Annual Wage (constant 2010 dollars)	$98,919	21.4%	-3.4%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	322	-8.9%	-2.0%	36,170	-1.1%	-0.3%
Employment	4,419	-4.2%	-9.0%	440,394	6.0%	-4.2%
Location Quotient	0.79			n/a		
Direct-Effect Employment Multiplier	2.3			2.4		
Total Employment Impact Multiplier	10,285			1,046,594		
Average Annual Wage (constant 2010 dollars)	$84,511	3.0%	-2.3%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	868	4.2%	3.5%	70,006	12.8%	6.7%
Employment	25,650	-13.7%	-7.3%	1,605,533	6.4%	-1.4%
Location Quotient	1.26			n/a		
Direct-Effect Employment Multiplier	3.3			3.2		
Total Employment Impact	84,217			5,051,791		
Average Annual Wage (constant 2010 dollars)	$95,806	1.1%	0.1%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	107,406	2.6%	-1.3%	8,752,494	12.5%	0.1%
Employment	1,353,928	-5.3%	-5.9%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$60,394	2.8%	-3.0%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

DELAWARE • Delaware has a diverse and highly specialized concentration of jobs in its bioscience industry. Three of the five major state bioscience subsectors show employment specialization—medical devices and equipment (location quotient of 2.86); bioscience-related distribution (LQ of 1.59); and research, testing, and medical labs (LQ of 1.33).



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Delaware	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	7,938	1,605,533	IV
Bioscience Industry Location Quotient	1.56	n/a	I
Biosciences Industry Establishments	285	70,006	V

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Delaware Highlights:

INDUSTRY SUBSECTOR	Delaware 2010	Delaware 2001–10 Change	Delaware 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	5	66.7%	25.0%	1,760	2.2%	4.5%
Employment	149	39.4%	-59.1%	72,988	-5.9%	-5.5%
Location Quotient	0.64			n/a		
Direct-Effect Employment Multiplier	1.5			5.6		
Total Employment Impact	219			405,197		
Average Annual Wage (constant 2010 dollars)	$74,421	42.9%	-26.7%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	13	225.0%	44.4%	2,908	11.3%	6.5%
Employment	559	-33.3%	-17.4%	296,759	-3.1%	-7.0%
Location Quotient	0.59			n/a		
Direct-Effect Employment Multiplier	2.6			5.3		
Total Employment Impact	1,469			1,464,492		
Average Annual Wage (constant 2010 dollars)	$76,951	5.4%	-7.6%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	35	75.0%	25.0%	6,957	11.7%	7.7%
Employment	3,114	50.6%	21.4%	343,468	-0.3%	-0.8%
Location Quotient	2.86			n/a		
Direct-Effect Employment Multiplier	3.1			2.9		
Total Employment Impact	9,648			956,767		
Average Annual Wage (constant 2010 dollars)	$86,681	34.8%	-3.1%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	82	91.1%	23.7%	22,212	48.9%	20.1%
Employment	1,903	-57.2%	-28.6%	451,923	23.8%	6.1%
Location Quotient	1.33			n/a		
Direct-Effect Employment Multiplier	2.8			2.6		
Total Employment Impact	5,392			1,178,741		
Average Annual Wage (constant 2010 dollars)	$113,258	12.2%	5.3%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	150	-34.6%	8.9%	36,170	-1.1%	-0.3%
Employment	2,213	3.7%	-28.3%	440,394	6.0%	-4.2%
Location Quotient	1.59			n/a		
Direct-Effect Employment Multiplier	2.3			2.4		
Total Employment Impact Multiplier	5,054			1,046,594		
Average Annual Wage (constant 2010 dollars)	$156,762	75.1%	28.5%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	285	-4.9%	16.3%	70,006	12.8%	6.7%
Employment	7,938	-17.3%	-15.2%	1,605,533	6.4%	-1.4%
Location Quotient	1.56			n/a		
Direct-Effect Employment Multiplier	2.7			3.2		
Total Employment Impact	21,783			5,051,791		
Average Annual Wage (constant 2010 dollars)	$111,674	27.6%	6.0%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	27,927	11.8%	-6.0%	8,752,494	12.5%	0.1%
Employment	338,854	-4.1%	-7.0%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$73,055	2.1%	-2.0%	$46,317	4.4%	-0.4%

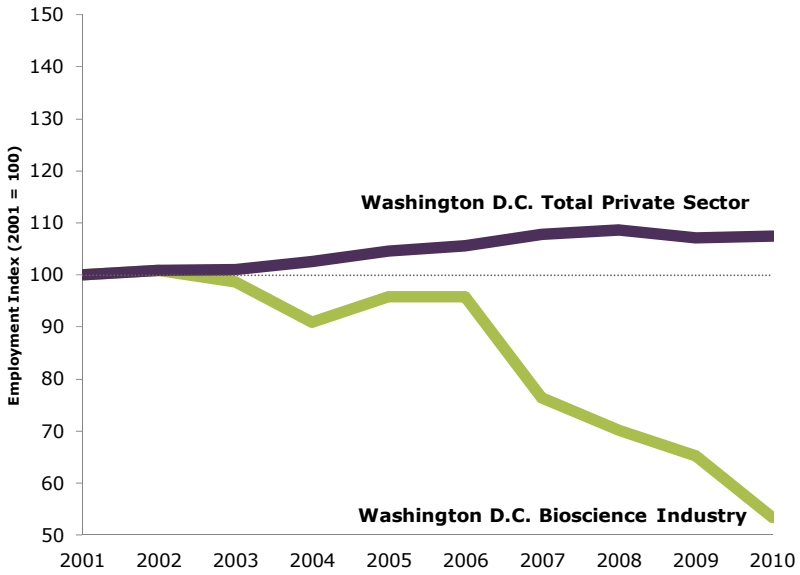
Note: U.S. employment metrics include Puerto Rico. Estimates of total employment impacts do not include Puerto Rico.

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

District of Columbia •

Washington, D.C. bioscience industry employment totaled nearly 2,000 jobs in 2010 across 167 individual establishments. Nearly all of this employment is in the service-based research, testing, and medical labs subsector which has shed jobs in recent years. The District has virtually no employment in the more manufacturing-oriented subsectors.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Washington D.C.	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	1,962	1,605,533	V
Bioscience Industry Location Quotient	0.29	n/a	V
Biosciences Industry Establishments	167	70,006	V

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Washington, D.C. Highlights:

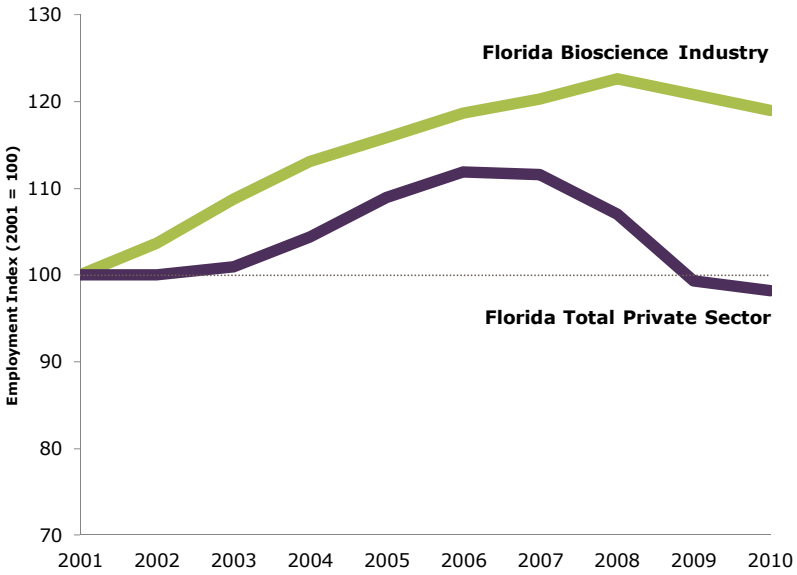
INDUSTRY SUBSECTOR	District of Columbia 2010	District of Columbia 2001–10 Change	District of Columbia 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	2	-63.3%	0.0%	1,760	2.2%	4.5%
Employment	5	-26.4%	6.8%	72,988	-5.9%	-5.5%
Location Quotient	0.02			n/a		
Direct-Effect Employment Multiplier	2.8			5.6		
Total Employment Impact	15			405,197		
Average Annual Wage (constant 2010 dollars)	$211,599	86.3%	-21.6%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	10	-52.4%	-28.6%	2,908	11.3%	6.5%
Employment	121	-12.3%	-6.9%	296,759	-3.1%	-7.0%
Location Quotient	0.10			n/a		
Direct-Effect Employment Multiplier	1.3			5.3		
Total Employment Impact	155			1,464,492		
Average Annual Wage (constant 2010 dollars)	$212,917	-0.9%	2.6%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	3	-67.9%	50.0%	6,957	11.7%	7.7%
Employment	9	-9.9%	25.8%	343,468	-0.3%	-0.8%
Location Quotient	0.01			n/a		
Direct-Effect Employment Multiplier	1.2			2.9		
Total Employment Impact	11			956,767		
Average Annual Wage (constant 2010 dollars)	$112,107	15.5%	-4.3%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	104	21.4%	16.4%	22,212	48.9%	20.1%
Employment	1,681	-49.8%	-28.9%	451,923	23.8%	6.1%
Location Quotient	0.89			n/a		
Direct-Effect Employment Multiplier	1.8			2.6		
Total Employment Impact	2,971			1,178,741		
Average Annual Wage (constant 2010 dollars)	$86,478	0.4%	-1.6%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	47	-0.9%	-16.2%	36,170	-1.1%	-0.3%
Employment	145	-10.0%	-50.6%	440,394	6.0%	-4.2%
Location Quotient	0.08			n/a		
Direct-Effect Employment Multiplier	1.5			2.4		
Total Employment Impact Multiplier	224			1,046,594		
Average Annual Wage (constant 2010 dollars)	$184,048	53.3%	2.2%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	167	-1.7%	1.5%	70,006	12.8%	6.7%
Employment	1,962	-46.5%	-29.9%	1,605,533	6.4%	-1.4%
Location Quotient	0.29			n/a		
Direct-Effect Employment Multiplier	1.7			3.2		
Total Employment Impact	3,376			5,051,791		
Average Annual Wage (constant 2010 dollars)	$101,939	10.2%	-1.5%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	34,373	21.9%	5.0%	8,752,494	12.5%	0.1%
Employment	447,934	7.5%	-0.2%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$48,648	11.9%	0.5%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

FLORIDA • Florida maintains a large and diverse bioscience industry, with more than 78,000 jobs that span 5,102 individual establishments. The state industry has grown overall by 19 percent since 2001 though it has experienced a modest 1 percent job loss since 2007. Florida has a specialized employment concentration in two of the five major subsectors—bioscience-related distribution and agricultural feedstock and chemicals.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Florida	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	78,062	1,605,533	I
Bioscience Industry Location Quotient	0.86	n/a	III
Biosciences Industry Establishments	5,102	70,006	I

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Florida Highlights:

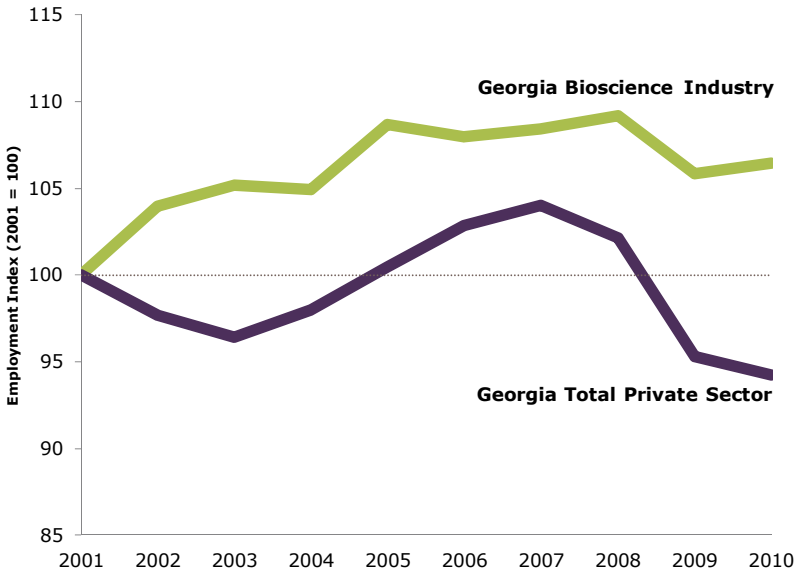
INDUSTRY SUBSECTOR	Florida			United States		
	2010	2001–10 Change	2007–10 Change	2010	2001–10 Change	2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	110	30.4%	35.3%	1,760	2.2%	4.5%
Employment	5,450	-5.3%	1.3%	72,988	-5.9%	-5.5%
Location Quotient	1.32			n/a		
Direct-Effect Employment Multiplier	5.0			5.6		
Total Employment Impact	27,518			405,197		
Average Annual Wage (constant 2010 dollars)	$67,186	11.5%	7.5%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	155	74.2%	47.6%	2,908	11.3%	6.5%
Employment	5,182	21.6%	2.1%	296,759	-3.1%	-7.0%
Location Quotient	0.31			n/a		
Direct-Effect Employment Multiplier	3.4			5.3		
Total Employment Impact	17,506			1,464,492		
Average Annual Wage (constant 2010 dollars)	$58,256	-11.9%	-7.2%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	498	50.9%	32.1%	6,957	11.7%	7.7%
Employment	16,237	7.3%	-7.5%	343,468	-0.3%	-0.8%
Location Quotient	0.84			n/a		
Direct-Effect Employment Multiplier	2.4			2.9		
Total Employment Impact	39,405			956,767		
Average Annual Wage (constant 2010 dollars)	$59,354	15.6%	6.1%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	1,357	73.7%	28.7%	22,212	48.9%	20.1%
Employment	16,678	17.4%	6.9%	451,923	23.8%	6.1%
Location Quotient	0.65			n/a		
Direct-Effect Employment Multiplier	2.3			2.6		
Total Employment Impact	37,669			1,178,741		
Average Annual Wage (constant 2010 dollars)	$64,461	5.1%	2.0%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	2,982	16.6%	-0.5%	36,170	-1.1%	-0.3%
Employment	34,514	31.4%	-2.2%	440,394	6.0%	-4.2%
Location Quotient	1.39			n/a		
Direct-Effect Employment Multiplier	2.4			2.4		
Total Employment Impact Multiplier	83,700			1,046,594		
Average Annual Wage (constant 2010 dollars)	$82,493	9.4%	-1.4%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	5,102	32.8%	10.5%	70,006	12.8%	6.7%
Employment	78,062	18.9%	-1.1%	1,605,533	6.4%	-1.4%
Location Quotient	0.86			n/a		
Direct-Effect Employment Multiplier	2.6			3.2		
Total Employment Impact	205,798			5,051,791		
Average Annual Wage (constant 2010 dollars)	$71,150	9.7%	0.7%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	586,095	30.6%	-1.9%	8,752,494	12.5%	0.1%
Employment	6,044,165	-1.8%	-12.0%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$40,558	6.1%	-1.0%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

GEORGIA • Georgia's bioscience industry employs nearly 28,000 across 1,640 establishments. Since 2001, the sector has grown its employment base by 6.5 percent overall, matching national industry job growth. The research, testing, and medical labs subsector has provided a source of steady job gains, increasing by 28 percent overall since 2001 in Georgia and maintaining growth in recent years by adding 4 percent to its employment base since 2007.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Georgia	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	27,720	1,605,533	II
Bioscience Industry Location Quotient	0.60	n/a	IV
Biosciences Industry Establishments	1,640	70,006	II

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Georgia Highlights:

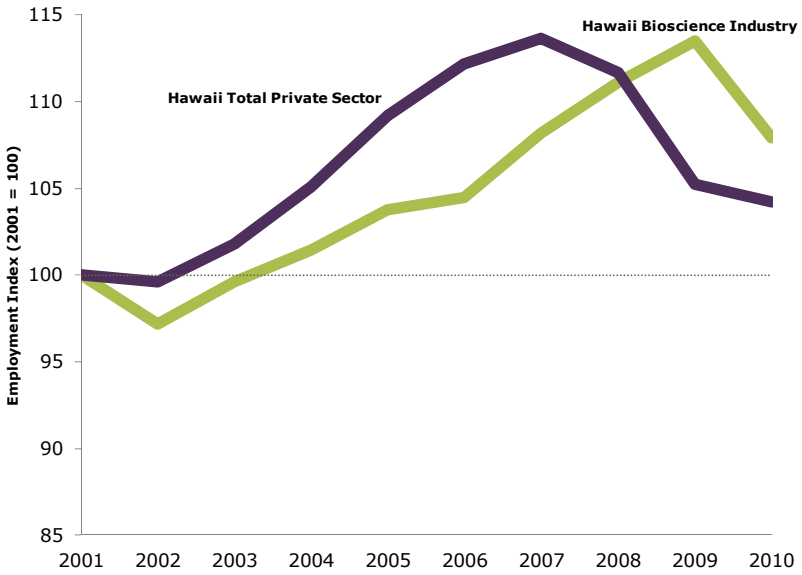
INDUSTRY SUBSECTOR	Georgia 2010	Georgia 2001–10 Change	Georgia 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	56	-6.0%	-1.8%	1,760	2.2%	4.5%
Employment	1,916	12.6%	5.2%	72,988	-5.9%	-5.5%
Location Quotient	0.91			n/a		
Direct-Effect Employment Multiplier	4.0			5.6		
Total Employment Impact	7,735			405,197		
Average Annual Wage (constant 2010 dollars)	$49,587	2.9%	-1.5%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	55	44.7%	12.2%	2,908	11.3%	6.5%
Employment	3,089	-2.6%	-5.3%	296,759	-3.1%	-7.0%
Location Quotient	0.36			n/a		
Direct-Effect Employment Multiplier	5.8			5.3		
Total Employment Impact	17,987			1,464,492		
Average Annual Wage (constant 2010 dollars)	$94,368	22.5%	0.1%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	137	54.1%	52.2%	6,957	11.7%	7.7%
Employment	3,668	-4.7%	1.1%	343,468	-0.3%	-0.8%
Location Quotient	0.37			n/a		
Direct-Effect Employment Multiplier	2.8			2.9		
Total Employment Impact	10,219			956,767		
Average Annual Wage (constant 2010 dollars)	$63,798	10.8%	-4.6%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	541	69.6%	21.9%	22,212	48.9%	20.1%
Employment	6,915	27.5%	3.6%	451,923	23.8%	6.1%
Location Quotient	0.53			n/a		
Direct-Effect Employment Multiplier	2.3			2.6		
Total Employment Impact	15,662			1,178,741		
Average Annual Wage (constant 2010 dollars)	$58,977	0.7%	0.8%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	851	-18.6%	1.5%	36,170	-1.1%	-0.3%
Employment	12,132	2.0%	-5.6%	440,394	6.0%	-4.2%
Location Quotient	0.95			n/a		
Direct-Effect Employment Multiplier	2.7			2.4		
Total Employment Impact Multiplier	32,521			1,046,594		
Average Annual Wage (constant 2010 dollars)	$88,144	9.4%	-1.2%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	1,640	5.8%	10.9%	70,006	12.8%	6.7%
Employment	27,720	6.5%	-1.8%	1,605,533	6.4%	-1.4%
Location Quotient	0.60			n/a		
Direct-Effect Employment Multiplier	3.0			3.2		
Total Employment Impact	84,124			5,051,791		
Average Annual Wage (constant 2010 dollars)	$75,676	8.1%	-1.9%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	257,648	14.1%	-1.5%	8,752,494	12.5%	0.1%
Employment	3,085,647	-5.8%	-9.4%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$44,326	1.3%	-1.3%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

HAWAII • Hawaii is home to a specialized and growing research, testing, and medical labs subsector. This largest subsector in the state accounts for two of three bioscience industry jobs and has a location quotient of 1.24 in 2010. Since 2001, the subsector has increased employment by 44 percent though growth has slowed in recent years.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Hawaii	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	3,644	1,605,533	V
Bioscience Industry Location Quotient	0.52	n/a	V
Biosciences Industry Establishments	208	70,006	V

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Hawaii Highlights:

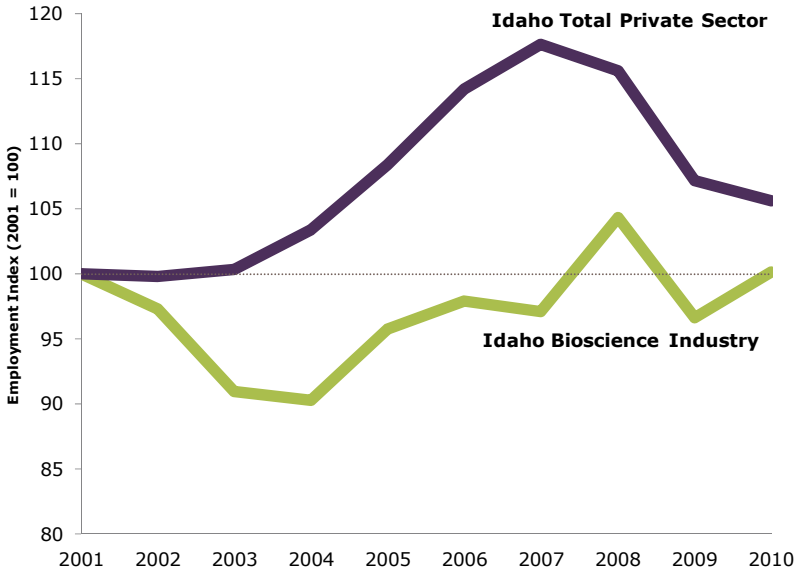
INDUSTRY SUBSECTOR	Hawaii			United States		
	2010	2001–10 Change	2007–10 Change	2010	2001–10 Change	2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	6	-51.4%	0.0%	1,760	2.2%	4.5%
Employment	75	-68.2%	-8.8%	72,988	-5.9%	-5.5%
Location Quotient	0.24			n/a		
Direct-Effect Employment Multiplier	3.3			5.6		
Total Employment Impact	250			405,197		
Average Annual Wage (constant 2010 dollars)	$37,556	-23.2%	-4.8%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	5	0.0%	25.0%	2,908	11.3%	6.5%
Employment	72	-10.3%	20.2%	296,759	-3.1%	-7.0%
Location Quotient	0.06			n/a		
Direct-Effect Employment Multiplier	3.2			5.3		
Total Employment Impact	231			1,464,492		
Average Annual Wage (constant 2010 dollars)	$44,161	2.9%	-9.4%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	2	-73.8%	0.0%	6,957	11.7%	7.7%
Employment	25	-92.4%	21.2%	343,468	-0.3%	-0.8%
Location Quotient	0.02			n/a		
Direct-Effect Employment Multiplier	2.0			2.9		
Total Employment Impact	49			956,767		
Average Annual Wage (constant 2010 dollars)	$45,369	-51.1%	-28.1%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	80	28.2%	16.0%	22,212	48.9%	20.1%
Employment	2,444	44.1%	0.1%	451,923	23.8%	6.1%
Location Quotient	1.24			n/a		
Direct-Effect Employment Multiplier	2.1			2.6		
Total Employment Impact	5,120			1,178,741		
Average Annual Wage (constant 2010 dollars)	$58,068	7.9%	3.7%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	115	-5.6%	4.2%	36,170	-1.1%	-0.3%
Employment	1,028	-0.9%	-1.7%	440,394	6.0%	-4.2%
Location Quotient	0.54			n/a		
Direct-Effect Employment Multiplier	2.0			2.4		
Total Employment Impact Multiplier	2,034			1,046,594		
Average Annual Wage (constant 2010 dollars)	$54,015	11.6%	5.1%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	208	-0.6%	8.7%	70,006	12.8%	6.7%
Employment	3,644	7.9%	-0.2%	1,605,533	6.4%	-1.4%
Location Quotient	0.52			n/a		
Direct-Effect Employment Multiplier	2.1			3.2		
Total Employment Impact	7,684			5,051,791		
Average Annual Wage (constant 2010 dollars)	$56,143	1.5%	3.5%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	36,667	7.7%	0.1%	8,752,494	12.5%	0.1%
Employment	464,848	4.2%	-8.3%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$39,304	7.1%	-0.2%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

IDAHO • Idaho bioscience firms employ more than 7,700 across 532 individual establishments. The state sector is diverse with a specialized concentration of jobs in three of the five major subsectors—agricultural feedstock and chemicals; research, testing, and medical labs; and bioscience-related distribution. Since 2001, total bioscience industry employment is flat at 0 percent net change though it has rebounded since the early 2000s as the line chart shows.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Idaho	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	7,707	1,605,533	IV
Bioscience Industry Location Quotient	1.04	n/a	II
Biosciences Industry Establishments	532	70,006	IV

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

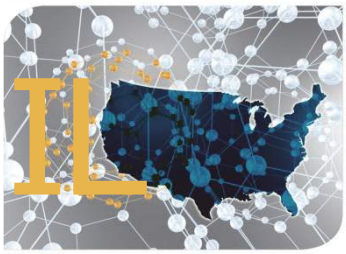
Idaho Highlights:

INDUSTRY SUBSECTOR	Idaho			United States		
	2010	2001–10 Change	2007–10 Change	2010	2001–10 Change	2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	37	7.9%	-14.0%	1,760	2.2%	4.5%
Employment	1,035	-0.7%	-36.2%	72,988	-5.9%	-5.5%
Location Quotient	3.08			n/a		
Direct-Effect Employment Multiplier	4.1			5.6		
Total Employment Impact	4,230			405,197		
Average Annual Wage (constant 2010 dollars)	$60,154	13.8%	8.8%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	19	241.0%	5.6%	2,908	11.3%	6.5%
Employment	235	-33.4%	28.4%	296,759	-3.1%	-7.0%
Location Quotient	0.17			n/a		
Direct-Effect Employment Multiplier	2.3			5.3		
Total Employment Impact	549			1,464,492		
Average Annual Wage (constant 2010 dollars)	$48,082	-46.9%	-9.9%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	49	72.7%	16.7%	6,957	11.7%	7.7%
Employment	286	-61.1%	-14.1%	343,468	-0.3%	-0.8%
Location Quotient	0.18			n/a		
Direct-Effect Employment Multiplier	1.7			2.9		
Total Employment Impact	477			956,767		
Average Annual Wage (constant 2010 dollars)	$41,440	19.1%	2.8%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	125	40.0%	28.0%	22,212	48.9%	20.1%
Employment	3,239	1.0%	39.4%	451,923	23.8%	6.1%
Location Quotient	1.55			n/a		
Direct-Effect Employment Multiplier	2.3			2.6		
Total Employment Impact	7,325			1,178,741		
Average Annual Wage (constant 2010 dollars)	$75,551	7.5%	6.8%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	302	30.8%	4.0%	36,170	-1.1%	-0.3%
Employment	2,912	23.5%	-3.3%	440,394	6.0%	-4.2%
Location Quotient	1.43			n/a		
Direct-Effect Employment Multiplier	1.9			2.4		
Total Employment Impact Multiplier	5,484			1,046,594		
Average Annual Wage (constant 2010 dollars)	$55,377	28.6%	11.7%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	532	37.0%	8.4%	70,006	12.8%	6.7%
Employment	7,707	0.2%	3.1%	1,605,533	6.4%	-1.4%
Location Quotient	1.04			n/a		
Direct-Effect Employment Multiplier	2.3			3.2		
Total Employment Impact	18,064			5,051,791		
Average Annual Wage (constant 2010 dollars)	$63,758	11.6%	11.7%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	51,877	18.8%	-3.5%	8,752,494	12.5%	0.1%
Employment	492,887	5.6%	-10.2%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$37,397	2.3%	-1.4%	$46,317	4.4%	-0.4%

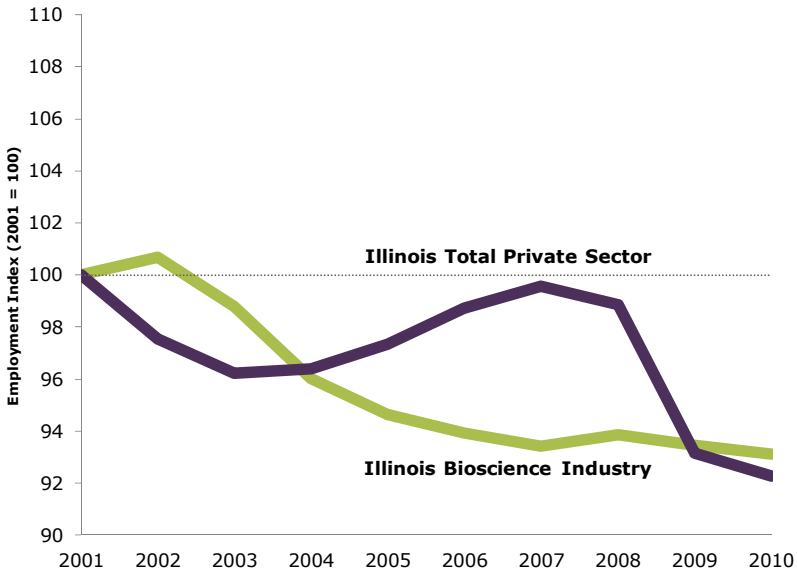
Note: U.S. employment metrics include Puerto Rico. Estimates of total employment impacts do not include Puerto Rico.

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).



ILLINOIS • Illinois has a large, diverse, and well concentrated industry base in the biosciences with nearly 80,000 jobs that span 3,424 individual business establishments. The state has a specialized employment concentration in three of the five major industry subsectors—agricultural feedstock and chemicals; bioscience-related distribution; and drugs and pharmaceuticals. While the industry has shed jobs since 2001, its medical device industry has added 10 percent to its base during that period.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Illinois	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	79,961	1,605,533	I
Bioscience Industry Location Quotient	1.14	n/a	II
Biosciences Industry Establishments	3,424	70,006	I

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

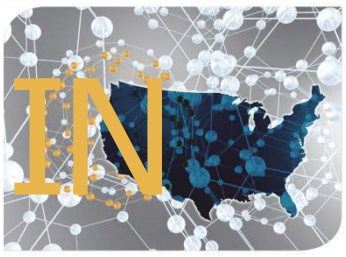
Illinois Highlights:

INDUSTRY SUBSECTOR	Illinois 2010	Illinois 2001–10 Change	Illinois 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	89	46.0%	5.1%	1,760	2.2%	4.5%
Employment	8,263	5.0%	-2.6%	72,988	-5.9%	-5.5%
Location Quotient	2.58			n/a		
Direct-Effect Employment Multiplier	8.7			5.6		
Total Employment Impact	72,202			405,197		
Average Annual Wage (constant 2010 dollars)	$78,188	19.5%	-3.7%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	128	2.4%	12.3%	2,908	11.3%	6.5%
Employment	18,032	-11.1%	-3.3%	296,759	-3.1%	-7.0%
Location Quotient	1.39			n/a		
Direct-Effect Employment Multiplier	6.9			5.3		
Total Employment Impact	123,897			1,464,492		
Average Annual Wage (constant 2010 dollars)	$117,761	29.1%	0.6%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	412	37.3%	24.1%	6,957	11.7%	7.7%
Employment	11,822	10.1%	8.2%	343,468	-0.3%	-0.8%
Location Quotient	0.79			n/a		
Direct-Effect Employment Multiplier	3.2			2.9		
Total Employment Impact	37,958			956,767		
Average Annual Wage (constant 2010 dollars)	$91,678	20.2%	-3.5%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	789	27.1%	13.7%	22,212	48.9%	20.1%
Employment	14,975	-25.2%	2.0%	451,923	23.8%	6.1%
Location Quotient	0.76			n/a		
Direct-Effect Employment Multiplier	2.8			2.6		
Total Employment Impact	41,401			1,178,741		
Average Annual Wage (constant 2010 dollars)	$84,371	-4.5%	-8.6%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	2,006	1.9%	-1.4%	36,170	-1.1%	-0.3%
Employment	26,869	-0.3%	-2.2%	440,394	6.0%	-4.2%
Location Quotient	1.39			n/a		
Direct-Effect Employment Multiplier	2.7			2.4		
Total Employment Impact Multiplier	71,548			1,046,594		
Average Annual Wage (constant 2010 dollars)	$85,743	18.5%	-7.7%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	3,424	11.3%	5.1%	70,006	12.8%	6.7%
Employment	79,961	-6.9%	-0.3%	1,605,533	6.4%	-1.4%
Location Quotient	1.14			n/a		
Direct-Effect Employment Multiplier	4.3			3.2		
Total Employment Impact	347,006			5,051,791		
Average Annual Wage (constant 2010 dollars)	$92,803	15.4%	-4.8%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	369,110	18.4%	5.2%	8,752,494	12.5%	0.1%
Employment	4,686,326	-7.7%	-7.3%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$34,608	2.6%	-1.9%	$46,317	4.4%	-0.4%

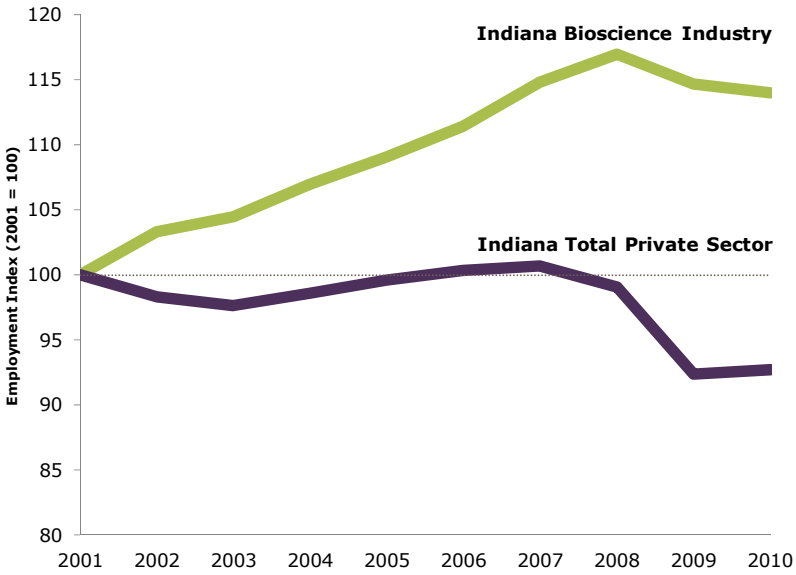
Note: U.S. employment metrics include Puerto Rico. Estimates of total employment impacts do not include Puerto Rico.

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).



INDIANA • Indiana is home to a large, highly specialized, and diverse bioscience industry. Since 2001, the state has increased bioscience jobs by 14 percent to nearly 60,000 by 2010. Indiana is one of only two states with a specialized employment concentration in four of the five major subsectors, its specializations include: agricultural feedstock and chemicals; drugs and pharmaceuticals; medical devices and equipment; and bioscience-related distribution.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Indiana	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	59,786	1,605,533	I
Bioscience Industry Location Quotient	1.73	n/a	I
Biosciences Industry Establishments	2,030	70,006	I

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Indiana Highlights:

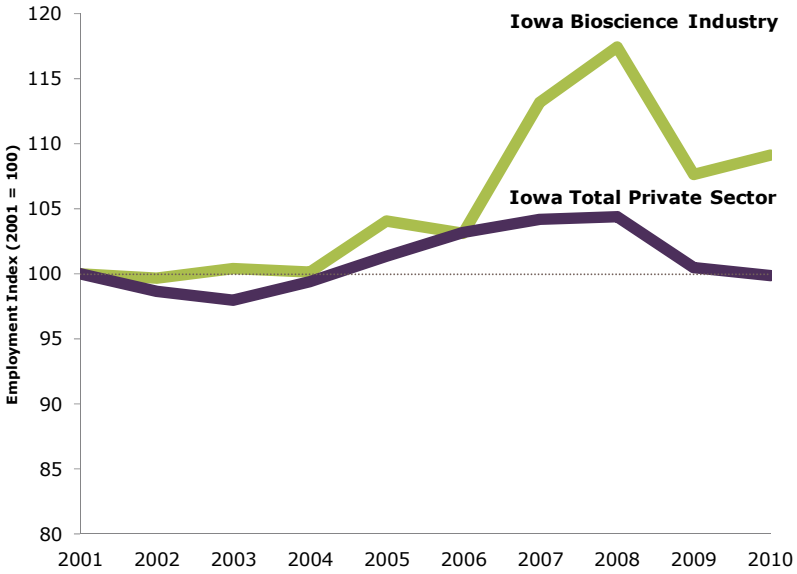
INDUSTRY SUBSECTOR	Indiana 2010	Indiana 2001–10 Change	Indiana 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	45	56.8%	32.4%	1,760	2.2%	4.5%
Employment	4,544	-4.9%	3.9%	72,988	-5.9%	-5.5%
Location Quotient	2.89			n/a		
Direct-Effect Employment Multiplier	6.4			5.6		
Total Employment Impact	29,043			405,197		
Average Annual Wage (constant 2010 dollars)	$79,050	-3.1%	-3.7%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	47	14.6%	6.8%	2,908	11.3%	6.5%
Employment	17,141	-7.5%	-12.2%	296,759	-3.1%	-7.0%
Location Quotient	2.68			n/a		
Direct-Effect Employment Multiplier	5.7			5.3		
Total Employment Impact	97,337			1,464,492		
Average Annual Wage (constant 2010 dollars)	$127,580	20.8%	20.2%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	143	27.7%	17.2%	6,957	11.7%	7.7%
Employment	18,936	47.2%	7.8%	343,468	-0.3%	-0.8%
Location Quotient	2.56			n/a		
Direct-Effect Employment Multiplier	2.7			2.9		
Total Employment Impact	50,547			956,767		
Average Annual Wage (constant 2010 dollars)	$65,181	3.4%	-3.6%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	349	54.2%	24.6%	22,212	48.9%	20.1%
Employment	7,746	10.4%	9.4%	451,923	23.8%	6.1%
Location Quotient	0.80			n/a		
Direct-Effect Employment Multiplier	2.2			2.6		
Total Employment Impact	17,375			1,178,741		
Average Annual Wage (constant 2010 dollars)	$59,158	5.1%	0.7%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	1,446	29.8%	-2.1%	36,170	-1.1%	-0.3%
Employment	11,419	23.4%	-1.9%	440,394	6.0%	-4.2%
Location Quotient	1.20			n/a		
Direct-Effect Employment Multiplier	2.3			2.4		
Total Employment Impact Multiplier	25,707			1,046,594		
Average Annual Wage (constant 2010 dollars)	$74,531	11.8%	-3.0%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	2,030	33.4%	3.8%	70,006	12.8%	6.7%
Employment	59,786	14.0%	-0.7%	1,605,533	6.4%	-1.4%
Location Quotient	1.73			n/a		
Direct-Effect Employment Multiplier	3.7			3.2		
Total Employment Impact	220,008			5,051,791		
Average Annual Wage (constant 2010 dollars)	$85,131	7.1%	3.9%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	152,293	4.1%	-0.4%	8,752,494	12.5%	0.1%
Employment	2,304,339	-7.3%	-7.9%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$49,524	0.3%	-0.8%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

IOWA • Iowa has a specialized employment concentration in the biosciences with firms employing nearly 24,000 across 1,250 establishments. Since 2001, the state industry has increased employment by 9 percent overall, though during the recent recession some of those gains were erased. Two bioscience subsectors are specialized in Iowa—agricultural feedstock and chemicals (with the nation's highest location quotient of 9.24) and bioscience-related distribution (LQ of 2.11).



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Iowa	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	23,729	1,605,533	III
Bioscience Industry Location Quotient	1.32	n/a	I
Biosciences Industry Establishments	1,250	70,006	II

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Iowa Highlights:

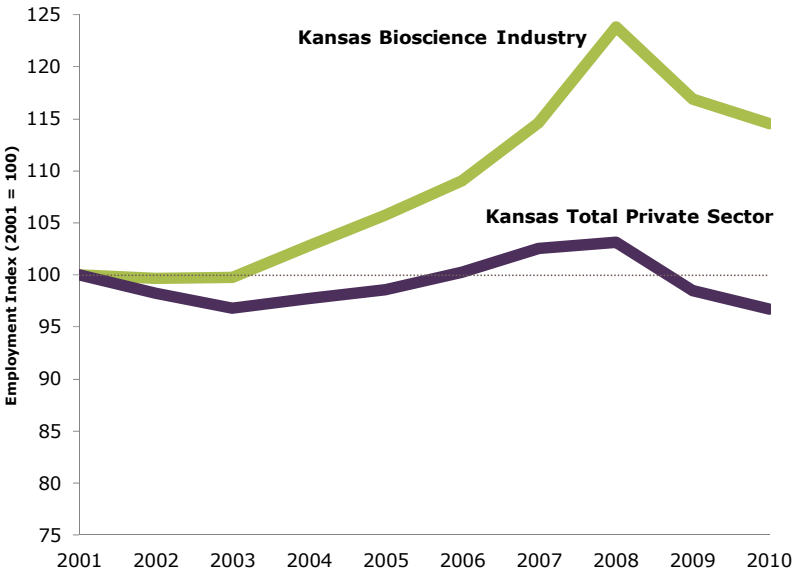
INDUSTRY SUBSECTOR	Iowa			United States		
	2010	2001–10 Change	2007–10 Change	2010	2001–10 Change	2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	128	28.9%	14.3%	1,760	2.2%	4.5%
Employment	7,578	34.5%	12.0%	72,988	-5.9%	-5.5%
Location Quotient	9.24			n/a		
Direct-Effect Employment Multiplier	4.8			5.6		
Total Employment Impact	36,645			405,197		
Average Annual Wage (constant 2010 dollars)	$70,192	7.5%	9.0%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	44	4.8%	10.0%	2,908	11.3%	6.5%
Employment	2,633	9.9%	-6.8%	296,759	-3.1%	-7.0%
Location Quotient	0.79			n/a		
Direct-Effect Employment Multiplier	2.6			5.3		
Total Employment Impact	6,936			1,464,492		
Average Annual Wage (constant 2010 dollars)	$61,369	22.1%	9.5%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	51	-2.8%	-8.9%	6,957	11.7%	7.7%
Employment	1,144	-11.5%	-62.0%	343,468	-0.3%	-0.8%
Location Quotient	0.30			n/a		
Direct-Effect Employment Multiplier	1.7			2.9		
Total Employment Impact	1,931			956,767		
Average Annual Wage (constant 2010 dollars)	$53,075	40.5%	-24.6%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	168	13.3%	10.2%	22,212	48.9%	20.1%
Employment	1,916	57.7%	21.3%	451,923	23.8%	6.1%
Location Quotient	0.38			n/a		
Direct-Effect Employment Multiplier	1.7			2.6		
Total Employment Impact	3,220			1,178,741		
Average Annual Wage (constant 2010 dollars)	$54,871	22.8%	5.3%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	860	-11.7%	-6.2%	36,170	-1.1%	-0.3%
Employment	10,457	-6.7%	0.2%	440,394	6.0%	-4.2%
Location Quotient	2.11			n/a		
Direct-Effect Employment Multiplier	1.9			2.4		
Total Employment Impact Multiplier	19,384			1,046,594		
Average Annual Wage (constant 2010 dollars)	$63,276	15.8%	1.4%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	1,250	-4.9%	-2.0%	70,006	12.8%	6.7%
Employment	23,729	9.1%	-3.6%	1,605,533	6.4%	-1.4%
Location Quotient	1.32			n/a		
Direct-Effect Employment Multiplier	2.9			3.2		
Total Employment Impact	68,116			5,051,791		
Average Annual Wage (constant 2010 dollars)	$64,103	15.8%	2.5%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	88,098	3.2%	0.5%	8,752,494	12.5%	0.1%
Employment	1,200,853	-0.1%	-4.1%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$39,229	7.0%	0.9%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

KANSAS • Kansas' bioscience industry employs more than 13,000 across 761 establishments with a specialized employment concentration in agricultural feedstock and chemicals. Two other subsectors are highly concentrated and represent the largest of the five major subsectors—research, testing, and medical labs (location quotient of 1.12) and bioscience-related distribution (LQ of 1.08). Bioscience industry employment peaked in Kansas in 2008 and, similar to the national sector, has shed jobs since then.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Kansas	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	13,266	1,605,533	III
Bioscience Industry Location Quotient	0.84	n/a	III
Biosciences Industry Establishments	761	70,006	IV

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Kansas Highlights:

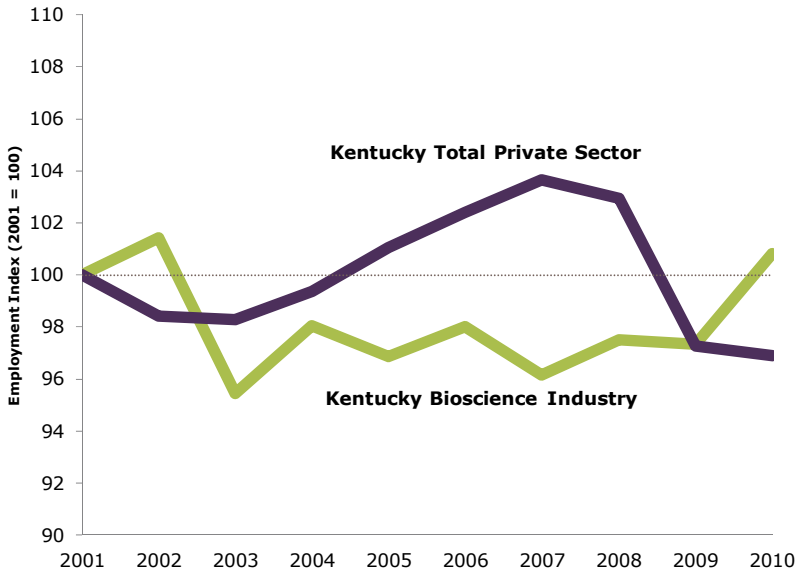
INDUSTRY SUBSECTOR	Kansas 2010	Kansas 2001–10 Change	Kansas 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	33	-12.9%	-8.3%	1,760	2.2%	4.5%
Employment	877	-28.3%	-29.4%	72,988	-5.9%	-5.5%
Location Quotient	1.23			n/a		
Direct-Effect Employment Multiplier	4.2			5.6		
Total Employment Impact	3,654			405,197		
Average Annual Wage (constant 2010 dollars)	$56,888	6.2%	-0.1%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	20	-13.0%	3.6%	2,908	11.3%	6.5%
Employment	2,032	99.8%	50.4%	296,759	-3.1%	-7.0%
Location Quotient	0.70			n/a		
Direct-Effect Employment Multiplier	3.0			5.3		
Total Employment Impact	6,038			1,464,492		
Average Annual Wage (constant 2010 dollars)	$66,775	10.3%	10.1%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	44	-22.0%	-4.3%	6,957	11.7%	7.7%
Employment	753	-43.9%	-0.9%	343,468	-0.3%	-0.8%
Location Quotient	0.22			n/a		
Direct-Effect Employment Multiplier	1.7			2.9		
Total Employment Impact	1,254			956,767		
Average Annual Wage (constant 2010 dollars)	$41,540	-0.1%	-0.4%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	209	63.6%	6.6%	22,212	48.9%	20.1%
Employment	4,955	34.0%	-8.1%	451,923	23.8%	6.1%
Location Quotient	1.12			n/a		
Direct-Effect Employment Multiplier	1.9			2.6		
Total Employment Impact	9,261			1,178,741		
Average Annual Wage (constant 2010 dollars)	$57,463	15.3%	0.3%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	454	-22.2%	-0.8%	36,170	-1.1%	-0.3%
Employment	4,649	8.1%	2.6%	440,394	6.0%	-4.2%
Location Quotient	1.08			n/a		
Direct-Effect Employment Multiplier	2.0			2.4		
Total Employment Impact Multiplier	9,476			1,046,594		
Average Annual Wage (constant 2010 dollars)	$68,818	4.5%	-3.0%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	761	-8.2%	0.7%	70,006	12.8%	6.7%
Employment	13,266	14.6%	-0.1%	1,605,533	6.4%	-1.4%
Location Quotient	0.84			n/a		
Direct-Effect Employment Multiplier	2.2			3.2		
Total Employment Impact	29,684			5,051,791		
Average Annual Wage (constant 2010 dollars)	$61,927	10.3%	0.9%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	82,212	8.5%	2.7%	8,752,494	12.5%	0.1%
Employment	1,047,659	-3.3%	-5.7%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$39,427	5.1%	-0.1%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

KENTUCKY • Bioscience industry employment reached 11,351 in Kentucky in 2010 spanning 927 business establishments. Its largest component subsector, bioscience-related distribution, employed more than 6,000 and has led job gains in recent years. The distribution subsector has increased jobs by 7 percent just since 2007 and has helped to drive total bioscience job growth over that period as well (up 5 percent).



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Kentucky	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	11,351	1,605,533	III
Bioscience Industry Location Quotient	0.54	n/a	IV
Biosciences Industry Establishments	927	70,006	III

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Kentucky Highlights:

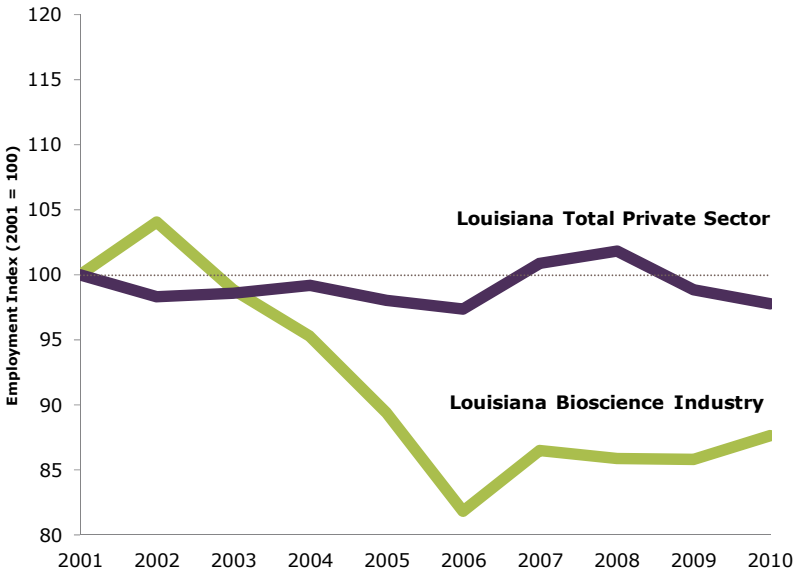
INDUSTRY SUBSECTOR	Kentucky 2010	Kentucky 2001–10 Change	Kentucky 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	23	15.0%	35.3%	1,760	2.2%	4.5%
Employment	507	33.4%	-3.9%	72,988	-5.9%	-5.5%
Location Quotient	0.53			n/a		
Direct-Effect Employment Multiplier	6.7			5.6		
Total Employment Impact	3,407			405,197		
Average Annual Wage (constant 2010 dollars)	$52,693	16.4%	-1.3%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	23	64.3%	21.1%	2,908	11.3%	6.5%
Employment	1,256	29.5%	3.0%	296,759	-3.1%	-7.0%
Location Quotient	0.32			n/a		
Direct-Effect Employment Multiplier	4.2			5.3		
Total Employment Impact	5,275			1,464,492		
Average Annual Wage (constant 2010 dollars)	$65,417	-1.3%	-6.6%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	54	55.3%	14.9%	6,957	11.7%	7.7%
Employment	1,400	-28.6%	-0.5%	343,468	-0.3%	-0.8%
Location Quotient	0.31			n/a		
Direct-Effect Employment Multiplier	2.1			2.9		
Total Employment Impact	3,010			956,767		
Average Annual Wage (constant 2010 dollars)	$45,751	9.3%	-6.6%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	273	144.8%	55.3%	22,212	48.9%	20.1%
Employment	2,149	10.3%	5.5%	451,923	23.8%	6.1%
Location Quotient	0.36			n/a		
Direct-Effect Employment Multiplier	2.0			2.6		
Total Employment Impact	4,348			1,178,741		
Average Annual Wage (constant 2010 dollars)	$50,349	5.3%	1.6%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	554	8.7%	21.4%	36,170	-1.1%	-0.3%
Employment	6,039	0.6%	7.1%	440,394	6.0%	-4.2%
Location Quotient	1.04			n/a		
Direct-Effect Employment Multiplier	2.3			2.4		
Total Employment Impact Multiplier	13,949			1,046,594		
Average Annual Wage (constant 2010 dollars)	$70,010	13.0%	-5.6%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	927	34.3%	29.6%	70,006	12.8%	6.7%
Employment	11,351	0.8%	4.8%	1,605,533	6.4%	-1.4%
Location Quotient	0.54			n/a		
Direct-Effect Employment Multiplier	2.6			3.2		
Total Employment Impact	29,988			5,051,791		
Average Annual Wage (constant 2010 dollars)	$62,013	11.1%	-4.3%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	103,907	1.5%	-3.3%	8,752,494	12.5%	0.1%
Employment	1,403,420	-3.1%	-6.5%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$38,368	4.1%	0.8%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

LOUISIANA • Louisiana has a highly specialized concentration of jobs in agricultural feedstock and chemicals with more than 2,600 employed and a location quotient of 2.60 in 2010. Since 2007, the subsector has increased employment by 4 percent. The state has also grown its research, testing, and medical labs and drugs and pharmaceuticals subsectors since 2007 and together have driven overall job gains in the biosciences during these difficult economic years (up 1 percent).



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Louisiana	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	10,378	1,605,533	IV
Bioscience Industry Location Quotient	0.47	n/a	V
Biosciences Industry Establishments	913	70,006	III

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Louisiana Highlights:

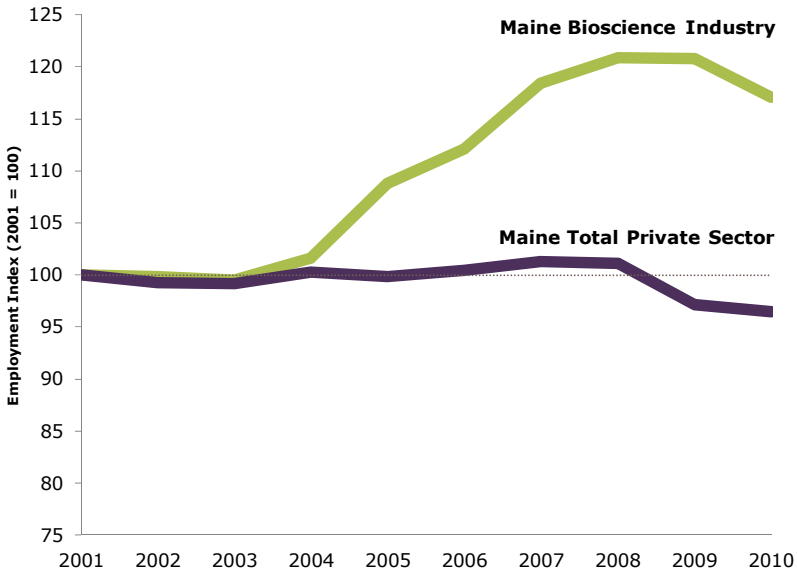
INDUSTRY SUBSECTOR	Louisiana 2010	Louisiana 2001–10 Change	Louisiana 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	38	-12.8%	5.6%	1,760	2.2%	4.5%
Employment	2,628	-14.9%	4.4%	72,988	-5.9%	-5.5%
Location Quotient	2.60			n/a		
Direct-Effect Employment Multiplier	6.9			5.6		
Total Employment Impact	18,240			405,197		
Average Annual Wage (constant 2010 dollars)	$88,944	9.4%	1.0%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	27	12.5%	80.0%	2,908	11.3%	6.5%
Employment	448	55.0%	85.1%	296,759	-3.1%	-7.0%
Location Quotient	0.11			n/a		
Direct-Effect Employment Multiplier	2.7			5.3		
Total Employment Impact	1,212			1,464,492		
Average Annual Wage (constant 2010 dollars)	$54,750	11.3%	15.7%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	57	8.5%	26.7%	6,957	11.7%	7.7%
Employment	226	-39.2%	-29.1%	343,468	-0.3%	-0.8%
Location Quotient	0.05			n/a		
Direct-Effect Employment Multiplier	1.9			2.9		
Total Employment Impact	437			956,767		
Average Annual Wage (constant 2010 dollars)	$48,136	29.4%	5.9%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	210	44.0%	19.7%	22,212	48.9%	20.1%
Employment	1,817	-8.7%	16.2%	451,923	23.8%	6.1%
Location Quotient	0.29			n/a		
Direct-Effect Employment Multiplier	2.0			2.6		
Total Employment Impact	3,626			1,178,741		
Average Annual Wage (constant 2010 dollars)	$46,890	20.4%	7.4%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	581	-13.9%	10.4%	36,170	-1.1%	-0.3%
Employment	5,259	-13.7%	-6.0%	440,394	6.0%	-4.2%
Location Quotient	0.86			n/a		
Direct-Effect Employment Multiplier	2.2			2.4		
Total Employment Impact Multiplier	11,455			1,046,594		
Average Annual Wage (constant 2010 dollars)	$73,833	19.5%	-3.1%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	913	-2.9%	14.5%	70,006	12.8%	6.7%
Employment	10,378	-12.3%	1.4%	1,605,533	6.4%	-1.4%
Location Quotient	0.47			n/a		
Direct-Effect Employment Multiplier	3.4			3.2		
Total Employment Impact	34,971			5,051,791		
Average Annual Wage (constant 2010 dollars)	$71,559	15.5%	-1.3%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	123,078	11.9%	7.4%	8,752,494	12.5%	0.1%
Employment	1,480,434	-2.2%	-3.1%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$41,437	15.2%	2.5%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

MAINE • Maine's bioscience industry employs 6,253 across 238 individual establishments. The state sector has added 17 percent to its jobs base overall since 2001 though has shed 1 percent of jobs since 2007. Two subsectors are highly concentrated in Maine—research, testing, and medical labs (location quotient of 1.16) and drugs and pharmaceuticals (LQ of 1.15). Both subsectors had strong job growth over the decade though research and testing has slowed in recent years.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Maine	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	6,253	1,605,533	IV
Bioscience Industry Location Quotient	0.87	n/a	II
Biosciences Industry Establishments	238	70,006	V

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Maine Highlights:

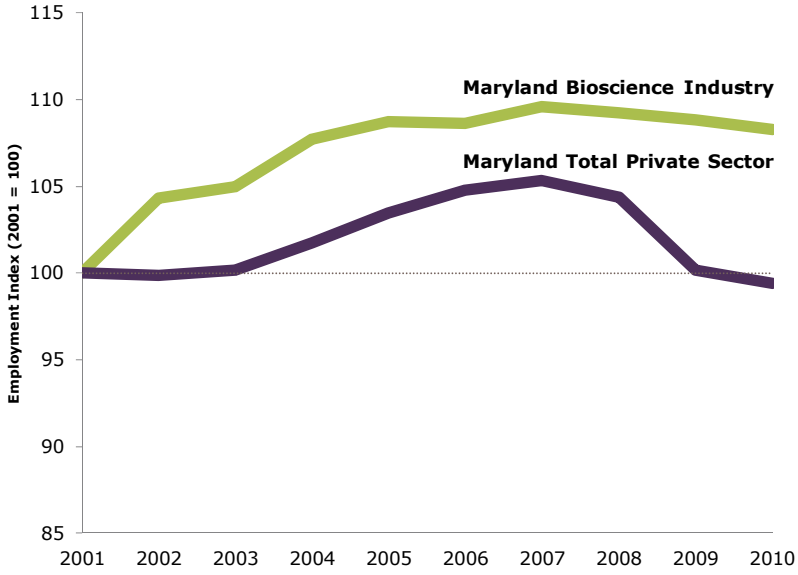
INDUSTRY SUBSECTOR	Maine			United States		
	2010	2001–10 Change	2007–10 Change	2010	2001–10 Change	2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	10	-20.7%	-28.6%	1,760	2.2%	4.5%
Employment	105	-46.9%	-42.0%	72,988	-5.9%	-5.5%
Location Quotient	0.32			n/a		
Direct-Effect Employment Multiplier	3.2			5.6		
Total Employment Impact	334			405,197		
Average Annual Wage (constant 2010 dollars)	$41,735	-1.4%	-0.9%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	23	4.5%	4.5%	2,908	11.3%	6.5%
Employment	1,528	63.2%	13.1%	296,759	-3.1%	-7.0%
Location Quotient	1.15			n/a		
Direct-Effect Employment Multiplier	4.4			5.3		
Total Employment Impact	6,723			1,464,492		
Average Annual Wage (constant 2010 dollars)	$100,898	53.9%	39.0%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	27	42.7%	3.8%	6,957	11.7%	7.7%
Employment	1,091	42.7%	7.9%	343,468	-0.3%	-0.8%
Location Quotient	0.71			n/a		
Direct-Effect Employment Multiplier	1.9			2.9		
Total Employment Impact	2,080			956,767		
Average Annual Wage (constant 2010 dollars)	$37,105	0.6%	10.5%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	73	31.7%	-6.2%	22,212	48.9%	20.1%
Employment	2,342	16.0%	-1.9%	451,923	23.8%	6.1%
Location Quotient	1.16			n/a		
Direct-Effect Employment Multiplier	2.0			2.6		
Total Employment Impact	4,722			1,178,741		
Average Annual Wage (constant 2010 dollars)	$50,346	8.8%	5.3%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	105	-37.3%	-13.3%	36,170	-1.1%	-0.3%
Employment	1,187	-16.5%	-14.8%	440,394	6.0%	-4.2%
Location Quotient	0.60			n/a		
Direct-Effect Employment Multiplier	2.2			2.4		
Total Employment Impact Multiplier	2,562			1,046,594		
Average Annual Wage (constant 2010 dollars)	$55,166	15.6%	10.4%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	238	-13.9%	-8.8%	70,006	12.8%	6.7%
Employment	6,253	17.1%	-1.1%	1,605,533	6.4%	-1.4%
Location Quotient	0.87			n/a		
Direct-Effect Employment Multiplier	2.6			3.2		
Total Employment Impact	16,421			5,051,791		
Average Annual Wage (constant 2010 dollars)	$61,159	26.0%	19.6%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	46,063	6.5%	-2.0%	8,752,494	12.5%	0.1%
Employment	478,810	-3.5%	-4.8%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$58,319	4.6%	0.9%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

MARYLAND • Maryland has a sizable and highly concentrated employment base in the biosciences that exceeded 33,000 jobs in 2010 and spans 1,842 business establishments. Two of its five major subsectors have a specialized employment concentration—research, testing, and medical labs (location quotient of 2.20) and drugs and pharmaceuticals (LQ of 1.20). Both specialized subsectors have seen considerable job growth since 2001 and maintained that growth even over the recession years. Despite a national decline in employment, Maryland's drugs and pharmaceuticals sector has grown by 37 percent since 2001.



Bioscience Employment Tier

II

I II III IV V

Summary of State Performance in Industry Related Metrics

Metrics	Maryland	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	33,257	1,605,533	II
Bioscience Industry Location Quotient	1.12	n/a	II
Biosciences Industry Establishments	1,842	70,006	II

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Maryland Highlights:

INDUSTRY SUBSECTOR	Maryland 2010	Maryland 2001–10 Change	Maryland 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	16	-28.3%	14.3%	1,760	2.2%	4.5%
Employment	214	-61.7%	-24.2%	72,988	-5.9%	-5.5%
Location Quotient	0.16			n/a		
Direct-Effect Employment Multiplier	3.3			5.6		
Total Employment Impact	716			405,197		
Average Annual Wage (constant 2010 dollars)	$66,722	-5.2%	-11.0%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	66	-2.9%	-4.3%	2,908	11.3%	6.5%
Employment	6,574	36.9%	5.7%	296,759	-3.1%	-7.0%
Location Quotient	1.20			n/a		
Direct-Effect Employment Multiplier	4.2			5.3		
Total Employment Impact	27,930			1,464,492		
Average Annual Wage (constant 2010 dollars)	$102,080	15.3%	-14.3%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	89	-7.5%	1.1%	6,957	11.7%	7.7%
Employment	1,977	-11.2%	-24.1%	343,468	-0.3%	-0.8%
Location Quotient	0.31			n/a		
Direct-Effect Employment Multiplier	2.6			2.9		
Total Employment Impact	5,102			956,767		
Average Annual Wage (constant 2010 dollars)	$67,611	10.1%	-1.6%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	964	52.3%	28.2%	22,212	48.9%	20.1%
Employment	18,336	14.5%	1.3%	451,923	23.8%	6.1%
Location Quotient	2.20			n/a		
Direct-Effect Employment Multiplier	2.7			2.6		
Total Employment Impact	48,732			1,178,741		
Average Annual Wage (constant 2010 dollars)	$91,650	20.0%	6.1%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	707	-19.5%	0.2%	36,170	-1.1%	-0.3%
Employment	6,157	-13.4%	-4.6%	440,394	6.0%	-4.2%
Location Quotient	0.76			n/a		
Direct-Effect Employment Multiplier	2.4			2.4		
Total Employment Impact Multiplier	14,728			1,046,594		
Average Annual Wage (constant 2010 dollars)	$81,997	-2.0%	2.1%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	1,842	8.5%	13.1%	70,006	12.8%	6.7%
Employment	33,257	8.3%	-1.2%	1,605,533	6.4%	-1.4%
Location Quotient	1.12			n/a		
Direct-Effect Employment Multiplier	2.9			3.2		
Total Employment Impact	97,208			5,051,791		
Average Annual Wage (constant 2010 dollars)	$90,336	14.7%	0.6%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	160,115	10.4%	-1.7%	8,752,494	12.5%	0.1%
Employment	1,968,759	-0.6%	-5.6%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$49,495	8.5%	1.4%	$46,317	4.4%	-0.4%

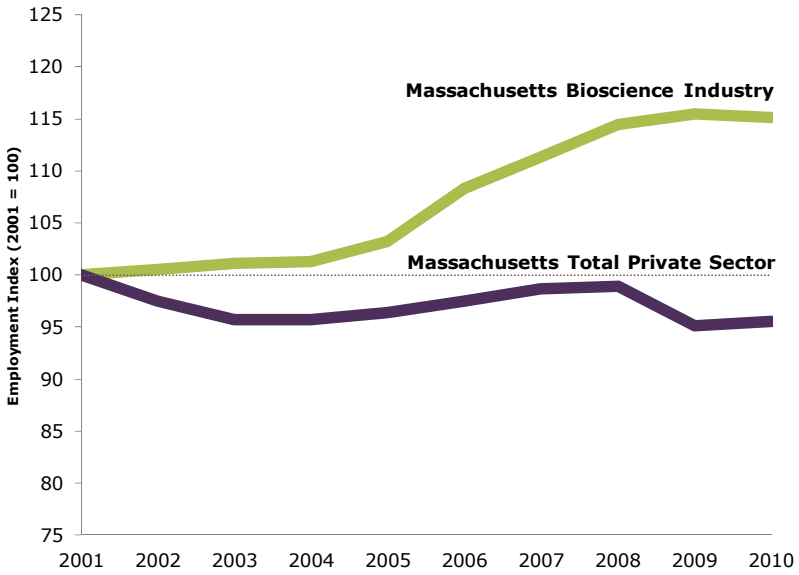
Note: U.S. employment metrics include Puerto Rico. Estimates of total employment impacts do not include Puerto Rico.

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

MASSACHUSETTS •

Massachusetts is home to a large, highly specialized, and growing bioscience industry. Since 2001 the sector has grown by 15 percent and managed to maintain job gains during the more recent period since 2007 which includes the deep national recession. The state is diverse across the subsectors with three of five having a specialized employment concentration in 2010—research, testing, and medical labs (location quotient of 3.27); medical devices and equipment (LQ of 2.30); and drugs and pharmaceuticals (LQ of 1.25).



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Massachusetts	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	77,762	1,605,533	I
Bioscience Industry Location Quotient	1.89	n/a	I
Biosciences Industry Establishments	1,979	70,006	I

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Massachusetts Highlights:

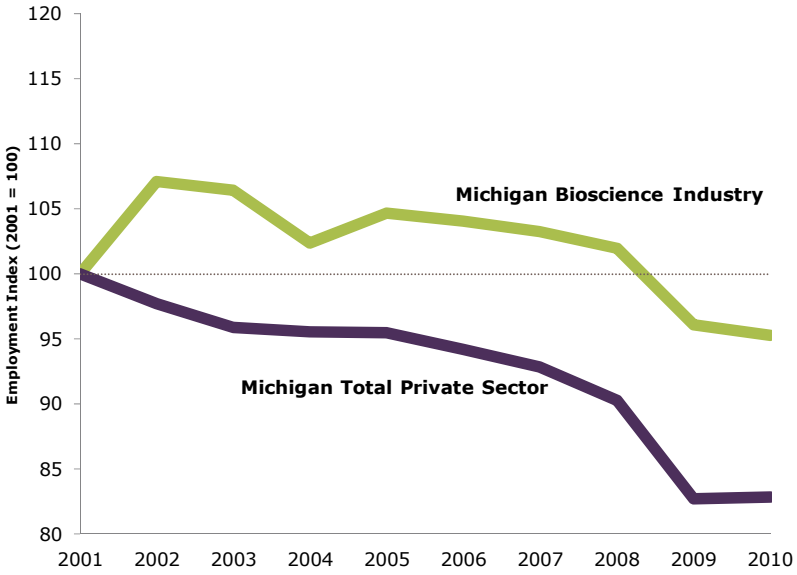
INDUSTRY SUBSECTOR	Massachusetts 2010	Massachusetts 2001–10 Change	Massachusetts 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	13	-53.6%	-13.3%	1,760	2.2%	4.5%
Employment	229	-40.5%	-20.9%	72,988	-5.9%	-5.5%
Location Quotient	0.12			n/a		
Direct-Effect Employment Multiplier	3.3			5.6		
Total Employment Impact	753			405,197		
Average Annual Wage (constant 2010 dollars)	$68,545	14.3%	-6.3%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	82	-4.7%	-12.8%	2,908	11.3%	6.5%
Employment	9,513	22.1%	4.2%	296,759	-3.1%	-7.0%
Location Quotient	1.25			n/a		
Direct-Effect Employment Multiplier	5.3			5.3		
Total Employment Impact	50,110			1,464,492		
Average Annual Wage (constant 2010 dollars)	$105,499	0.6%	-21.7%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	281	-8.1%	-5.4%	6,957	11.7%	7.7%
Employment	20,182	-19.0%	-1.2%	343,468	-0.3%	-0.8%
Location Quotient	2.30			n/a		
Direct-Effect Employment Multiplier	3.4			2.9		
Total Employment Impact	69,480			956,767		
Average Annual Wage (constant 2010 dollars)	$102,229	20.0%	6.9%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	1,154	36.5%	17.4%	22,212	48.9%	20.1%
Employment	37,789	44.5%	8.4%	451,923	23.8%	6.1%
Location Quotient	3.27			n/a		
Direct-Effect Employment Multiplier	2.9			2.6		
Total Employment Impact	110,460			1,178,741		
Average Annual Wage (constant 2010 dollars)	$108,554	18.4%	4.6%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	449	-19.8%	0.2%	36,170	-1.1%	-0.3%
Employment	10,049	21.3%	-4.3%	440,394	6.0%	-4.2%
Location Quotient	0.89			n/a		
Direct-Effect Employment Multiplier	2.4			2.4		
Total Employment Impact Multiplier	24,120			1,046,594		
Average Annual Wage (constant 2010 dollars)	$101,888	29.6%	4.4%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	1,979	8.4%	7.7%	70,006	12.8%	6.7%
Employment	77,762	15.1%	3.4%	1,605,533	6.4%	-1.4%
Location Quotient	1.89			n/a		
Direct-Effect Employment Multiplier	3.3			3.2		
Total Employment Impact	254,923			5,051,791		
Average Annual Wage (constant 2010 dollars)	$105,559	18.6%	1.2%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	213,693	14.8%	4.5%	8,752,494	12.5%	0.1%
Employment	2,733,845	-4.5%	-3.1%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$36,582	4.0%	-0.7%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

MICHIGAN • The Michigan bioscience industry employs more than 39,000 across 1,595 individual business establishments. Its largest major subsector is bioscience-related distribution with more than 11,000 jobs in 2010 and growth of 13 percent overall since 2001, well above the national growth rate. Two other subsectors—medical devices and equipment and agricultural feedstock and chemicals—have each added jobs in Michigan in recent years despite employment declines at the national level.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Michigan	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	39,282	1,605,533	II
Bioscience Industry Location Quotient	0.82	n/a	III
Biosciences Industry Establishments	1,595	70,006	II

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Michigan Highlights:

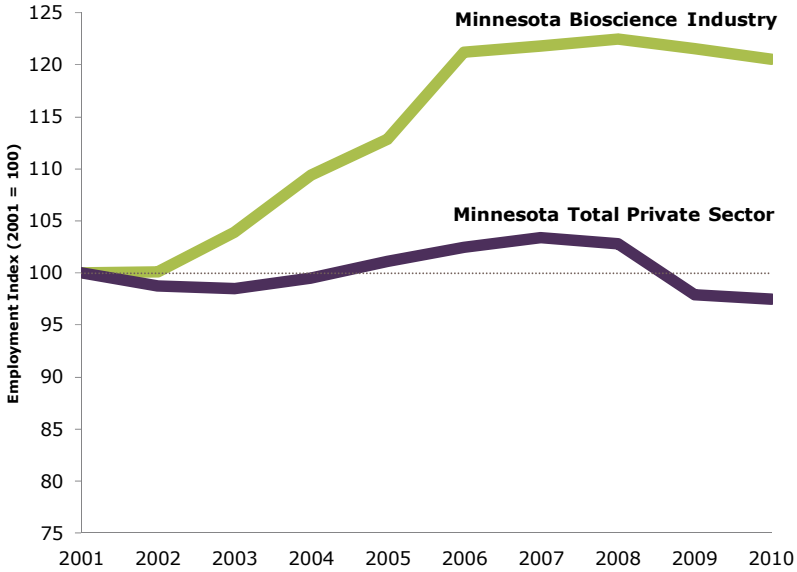
INDUSTRY SUBSECTOR	Michigan			United States		
	2010	2001–10 Change	2007–10 Change	2010	2001–10 Change	2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	28	-6.0%	54.6%	1,760	2.2%	4.5%
Employment	802	96.6%	13.0%	72,988	-5.9%	-5.5%
Location Quotient	0.37			n/a		
Direct-Effect Employment Multiplier	4.4			5.6		
Total Employment Impact	3,492			405,197		
Average Annual Wage (constant 2010 dollars)	$57,069	-12.2%	7.9%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	60	5.3%	-9.1%	2,908	11.3%	6.5%
Employment	7,305	-34.8%	-11.5%	296,759	-3.1%	-7.0%
Location Quotient	0.83			n/a		
Direct-Effect Employment Multiplier	4.9			5.3		
Total Employment Impact	35,890			1,464,492		
Average Annual Wage (constant 2010 dollars)	$81,271	-0.4%	-5.8%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	211	-1.4%	3.9%	6,957	11.7%	7.7%
Employment	10,328	1.6%	8.1%	343,468	-0.3%	-0.8%
Location Quotient	1.01			n/a		
Direct-Effect Employment Multiplier	2.8			2.9		
Total Employment Impact	29,024			956,767		
Average Annual Wage (constant 2010 dollars)	$63,629	16.9%	2.2%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	408	50.3%	20.1%	22,212	48.9%	20.1%
Employment	9,802	1.3%	-21.7%	451,923	23.8%	6.1%
Location Quotient	0.73			n/a		
Direct-Effect Employment Multiplier	3.0			2.6		
Total Employment Impact	29,047			1,178,741		
Average Annual Wage (constant 2010 dollars)	$84,817	-5.7%	-13.4%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	887	-3.5%	-7.5%	36,170	-1.1%	-0.3%
Employment	11,045	13.0%	-4.2%	440,394	6.0%	-4.2%
Location Quotient	0.84			n/a		
Direct-Effect Employment Multiplier	2.5			2.4		
Total Employment Impact Multiplier	27,204			1,046,594		
Average Annual Wage (constant 2010 dollars)	$81,151	13.2%	-2.7%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	1,595	6.9%	0.5%	70,006	12.8%	6.7%
Employment	39,282	-4.7%	-7.7%	1,605,533	6.4%	-1.4%
Location Quotient	0.82			n/a		
Direct-Effect Employment Multiplier	3.2			3.2		
Total Employment Impact	124,657			5,051,791		
Average Annual Wage (constant 2010 dollars)	$76,989	3.5%	-7.2%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	240,789	-4.6%	-3.5%	8,752,494	12.5%	0.1%
Employment	3,178,935	-17.1%	-10.8%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$43,632	-5.6%	-3.8%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

MINNESOTA • Minnesota has a large and specialized bioscience industry base with just over 48,000 jobs in 2010 spanning 1,653 business establishments. The state is a national leader in medical device manufacturing with 26,774 jobs in 2010 and a highly specialized location quotient of 3.81. Despite the difficult period since 2007 which includes the deep national recession, three of the state's five major subsectors managed to add jobs—drugs and pharmaceuticals (up 15 percent since 2007); agricultural feedstock and chemicals (up 5 percent); and research, testing, and medical labs (up 4 percent).



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Minnesota	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	48,001	1,605,533	I
Bioscience Industry Location Quotient	1.46	n/a	I
Biosciences Industry Establishments	1,653	70,006	II

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Minnesota Highlights:

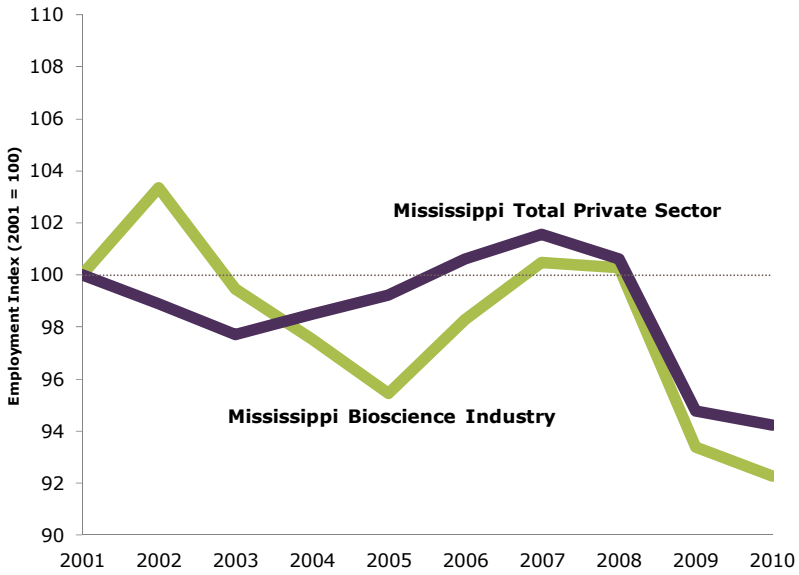
INDUSTRY SUBSECTOR	Minnesota 2010	Minnesota 2001–10 Change	Minnesota 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	58	45.0%	7.4%	1,760	2.2%	4.5%
Employment	1,589	23.5%	4.6%	72,988	-5.9%	-5.5%
Location Quotient	1.07			n/a		
Direct-Effect Employment Multiplier	5.4			5.6		
Total Employment Impact	8,529			405,197		
Average Annual Wage (constant 2010 dollars)	$57,189	5.7%	1.1%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	54	5.9%	10.2%	2,908	11.3%	6.5%
Employment	3,478	54.6%	14.9%	296,759	-3.1%	-7.0%
Location Quotient	0.57			n/a		
Direct-Effect Employment Multiplier	3.7			5.3		
Total Employment Impact	12,760			1,464,492		
Average Annual Wage (constant 2010 dollars)	$69,191	8.9%	0.7%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	332	53.9%	10.3%	6,957	11.7%	7.7%
Employment	26,774	31.3%	-0.3%	343,468	-0.3%	-0.8%
Location Quotient	3.81			n/a		
Direct-Effect Employment Multiplier	3.4			2.9		
Total Employment Impact	90,533			956,767		
Average Annual Wage (constant 2010 dollars)	$87,819	21.3%	7.9%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	317	41.6%	17.2%	22,212	48.9%	20.1%
Employment	6,218	15.8%	4.4%	451,923	23.8%	6.1%
Location Quotient	0.67			n/a		
Direct-Effect Employment Multiplier	2.5			2.6		
Total Employment Impact	15,545			1,178,741		
Average Annual Wage (constant 2010 dollars)	$80,729	15.6%	6.1%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	892	17.4%	9.8%	36,170	-1.1%	-0.3%
Employment	9,942	-5.5%	-10.9%	440,394	6.0%	-4.2%
Location Quotient	1.11			n/a		
Direct-Effect Employment Multiplier	2.5			2.4		
Total Employment Impact Multiplier	24,983			1,046,594		
Average Annual Wage (constant 2010 dollars)	$85,201	25.3%	4.0%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	1,653	28.1%	11.2%	70,006	12.8%	6.7%
Employment	48,001	20.6%	-1.1%	1,605,533	6.4%	-1.4%
Location Quotient	1.46			n/a		
Direct-Effect Employment Multiplier	3.2			3.2		
Total Employment Impact	152,351			5,051,791		
Average Annual Wage (constant 2010 dollars)	$83,995	20.3%	5.9%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	155,038	4.7%	-2.8%	8,752,494	12.5%	0.1%
Employment	2,184,054	-2.5%	-5.7%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$46,985	3.8%	0.1%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

MISSISSIPPI • Mississippi's bioscience industry employs more than 6,500 across 469 business establishments. The state has a specialized concentration of employment in the agricultural feedstock and chemicals subsector with nearly 1,200 jobs and a location quotient of 2.04 in 2010. Despite overall employment declines in the state's bioscience sector in recent years, two of the five major subsectors have added jobs since 2007—medical devices and research, testing, and medical labs.



Bioscience Employment Tier

IV

I II III IV V

Summary of State Performance in Industry Related Metrics

Metrics	Mississippi	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	6,522	1,605,533	IV
Bioscience Industry Location Quotient	0.52	n/a	V
Biosciences Industry Establishments	469	70,006	IV

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Mississippi Highlights:

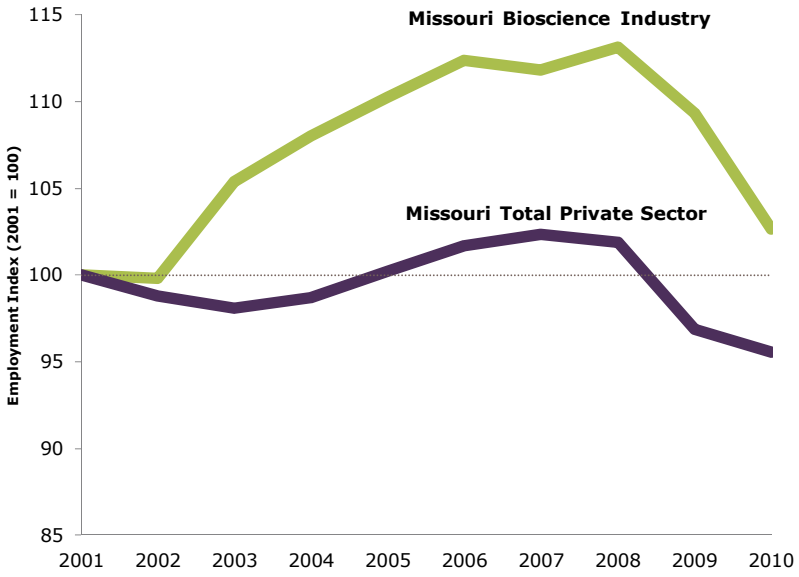
INDUSTRY SUBSECTOR	Mississippi			United States		
	2010	2001–10 Change	2007–10 Change	2010	2001–10 Change	2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	20	5.1%	0.0%	1,760	2.2%	4.5%
Employment	1,162	-9.1%	-8.8%	72,988	-5.9%	-5.5%
Location Quotient	2.04			n/a		
Direct-Effect Employment Multiplier	4.5			5.6		
Total Employment Impact	5,273			405,197		
Average Annual Wage (constant 2010 dollars)	$51,006	8.9%	13.0%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	14	7.7%	-17.6%	2,908	11.3%	6.5%
Employment	930	-19.3%	-24.9%	296,759	-3.1%	-7.0%
Location Quotient	0.40			n/a		
Direct-Effect Employment Multiplier	2.4			5.3		
Total Employment Impact	2,272			1,464,492		
Average Annual Wage (constant 2010 dollars)	$41,601	4.8%	4.7%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	27	-11.1%	-10.0%	6,957	11.7%	7.7%
Employment	550	-27.9%	19.3%	343,468	-0.3%	-0.8%
Location Quotient	0.21			n/a		
Direct-Effect Employment Multiplier	1.8			2.9		
Total Employment Impact	973			956,767		
Average Annual Wage (constant 2010 dollars)	$39,131	19.7%	-17.3%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	98	35.7%	12.1%	22,212	48.9%	20.1%
Employment	861	-0.7%	11.8%	451,923	23.8%	6.1%
Location Quotient	0.24			n/a		
Direct-Effect Employment Multiplier	1.8			2.6		
Total Employment Impact	1,561			1,178,741		
Average Annual Wage (constant 2010 dollars)	$48,418	15.6%	-0.7%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	310	-10.4%	-1.2%	36,170	-1.1%	-0.3%
Employment	3,018	0.5%	-10.1%	440,394	6.0%	-4.2%
Location Quotient	0.88			n/a		
Direct-Effect Employment Multiplier	2.0			2.4		
Total Employment Impact Multiplier	6,108			1,046,594		
Average Annual Wage (constant 2010 dollars)	$65,652	8.3%	-18.9%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	469	-2.5%	0.2%	70,006	12.8%	6.7%
Employment	6,522	-7.7%	-8.2%	1,605,533	6.4%	-1.4%
Location Quotient	0.52			n/a		
Direct-Effect Employment Multiplier	2.5			3.2		
Total Employment Impact	16,187			5,051,791		
Average Annual Wage (constant 2010 dollars)	$55,099	11.6%	-10.6%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	65,138	9.1%	-1.0%	8,752,494	12.5%	0.1%
Employment	833,480	-5.8%	-7.2%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$40,860	6.4%	0.6%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

MISSOURI • Missouri's bioscience industry maintains a specialized employment concentration in the agricultural feedstock and chemicals subsector with more than 2,600 state jobs and a location quotient of 1.80 in 2010. Despite national declines in the agbioscience subsector, Missouri has managed to add jobs since 2007. Its largest subsector, research, testing, and medical labs, emerged over the decade with 60 percent job growth overall since 2001 and is highly concentrated with a 1.08 location quotient.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Missouri	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	27,180	1,605,533	II
Bioscience Industry Location Quotient	0.84	n/a	III
Biosciences Industry Establishments	1,309	70,006	II

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Missouri Highlights:

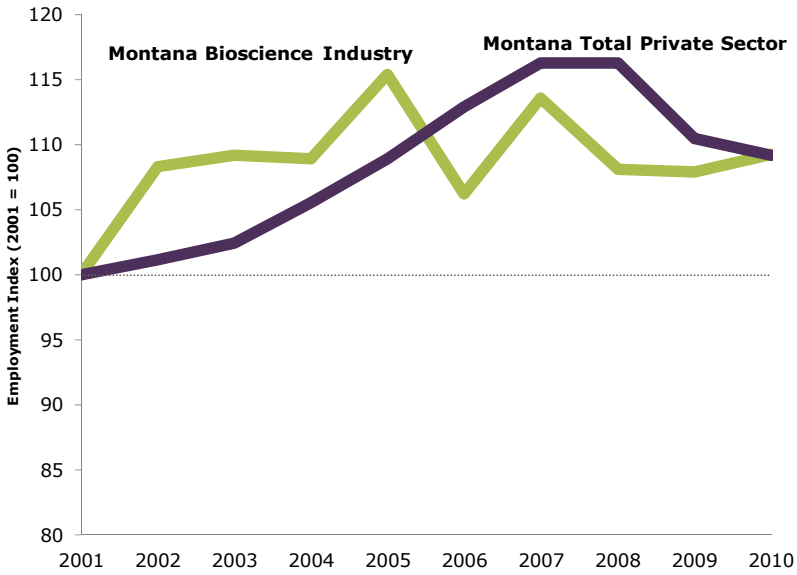
INDUSTRY SUBSECTOR	Missouri 2010	Missouri 2001–10 Change	Missouri 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	74	-3.5%	-12.6%	1,760	2.2%	4.5%
Employment	2,630	-7.2%	3.4%	72,988	-5.9%	-5.5%
Location Quotient	1.80			n/a		
Direct-Effect Employment Multiplier	5.8			5.6		
Total Employment Impact	15,221			405,197		
Average Annual Wage (constant 2010 dollars)	$58,836	-15.5%	-8.7%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	67	-20.2%	-11.8%	2,908	11.3%	6.5%
Employment	4,573	-13.0%	-12.1%	296,759	-3.1%	-7.0%
Location Quotient	0.77			n/a		
Direct-Effect Employment Multiplier	5.1			5.3		
Total Employment Impact	23,187			1,464,492		
Average Annual Wage (constant 2010 dollars)	$76,123	-12.6%	9.3%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	96	-12.8%	7.9%	6,957	11.7%	7.7%
Employment	2,508	-26.0%	-21.3%	343,468	-0.3%	-0.8%
Location Quotient	0.36			n/a		
Direct-Effect Employment Multiplier	2.2			2.9		
Total Employment Impact	5,606			956,767		
Average Annual Wage (constant 2010 dollars)	$50,052	-1.4%	-1.4%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	427	39.0%	13.2%	22,212	48.9%	20.1%
Employment	9,758	59.8%	-2.1%	451,923	23.8%	6.1%
Location Quotient	1.08			n/a		
Direct-Effect Employment Multiplier	3.1			2.6		
Total Employment Impact	30,436			1,178,741		
Average Annual Wage (constant 2010 dollars)	$78,787	-1.2%	-13.4%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	645	-31.1%	-12.7%	36,170	-1.1%	-0.3%
Employment	7,711	-13.3%	-11.5%	440,394	6.0%	-4.2%
Location Quotient	0.87			n/a		
Direct-Effect Employment Multiplier	2.4			2.4		
Total Employment Impact Multiplier	18,792			1,046,594		
Average Annual Wage (constant 2010 dollars)	$65,030	-3.8%	-6.1%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	1,309	-13.6%	-4.2%	70,006	12.8%	6.7%
Employment	27,180	2.6%	-8.2%	1,605,533	6.4%	-1.4%
Location Quotient	0.84			n/a		
Direct-Effect Employment Multiplier	3.4			3.2		
Total Employment Impact	93,242			5,051,791		
Average Annual Wage (constant 2010 dollars)	$69,853	-3.4%	-5.9%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	163,962	6.6%	-0.6%	8,752,494	12.5%	0.1%
Employment	2,143,636	-4.4%	-6.6%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$33,524	1.7%	-0.1%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

MONTANA • Montana employs nearly 2,500 in its bioscience industry across 354 business establishments. Though modest in size, the state industry has grown by 9 percent overall since 2001. Its largest major subsector, bioscience-related distribution, represents just over 1,300 jobs in 2010.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Montana	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	2,464	1,605,533	V
Bioscience Industry Location Quotient	0.49	n/a	V
Biosciences Industry Establishments	354	70,006	IV

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Montana Highlights:

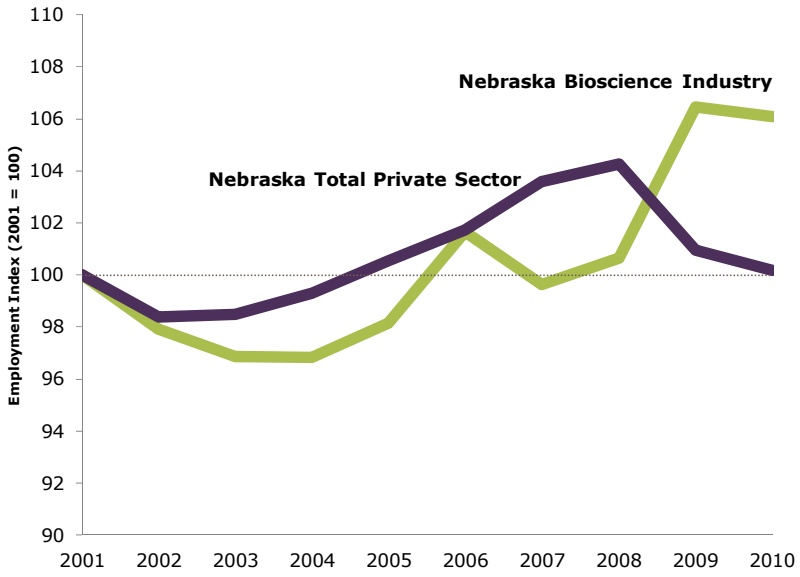
INDUSTRY SUBSECTOR	Montana			United States		
	2010	2001–10 Change	2007–10 Change	2010	2001–10 Change	2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	11	-47.0%	-21.4%	1,760	2.2%	4.5%
Employment	117	-18.9%	-40.5%	72,988	-5.9%	-5.5%
Location Quotient	0.51			n/a		
Direct-Effect Employment Multiplier	3.3			5.6		
Total Employment Impact	379			405,197		
Average Annual Wage (constant 2010 dollars)	$41,680	-3.1%	-18.7%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	12	50.0%	20.0%	2,908	11.3%	6.5%
Employment	240	211.7%	47.2%	296,759	-3.1%	-7.0%
Location Quotient	0.26			n/a		
Direct-Effect Employment Multiplier	2.3			5.3		
Total Employment Impact	540			1,464,492		
Average Annual Wage (constant 2010 dollars)	$38,780	-0.1%	-21.5%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	26	28.6%	13.0%	6,957	11.7%	7.7%
Employment	238	12.4%	7.6%	343,468	-0.3%	-0.8%
Location Quotient	0.22			n/a		
Direct-Effect Employment Multiplier	1.5			2.9		
Total Employment Impact	365			956,767		
Average Annual Wage (constant 2010 dollars)	$40,382	11.8%	6.1%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	86	31.3%	22.5%	22,212	48.9%	20.1%
Employment	563	58.9%	3.9%	451,923	23.8%	6.1%
Location Quotient	0.40			n/a		
Direct-Effect Employment Multiplier	1.9			2.6		
Total Employment Impact	1,094			1,178,741		
Average Annual Wage (constant 2010 dollars)	$55,878	22.7%	1.8%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	219	-24.6%	-1.7%	36,170	-1.1%	-0.3%
Employment	1,307	-11.0%	-9.3%	440,394	6.0%	-4.2%
Location Quotient	0.95			n/a		
Direct-Effect Employment Multiplier	1.9			2.4		
Total Employment Impact Multiplier	2,514			1,046,594		
Average Annual Wage (constant 2010 dollars)	$56,091	12.3%	1.7%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	354	-12.5%	4.1%	70,006	12.8%	6.7%
Employment	2,464	9.2%	-3.8%	1,605,533	6.4%	-1.4%
Location Quotient	0.49			n/a		
Direct-Effect Employment Multiplier	2.0			3.2		
Total Employment Impact	4,893			5,051,791		
Average Annual Wage (constant 2010 dollars)	$52,160	10.7%	-1.5%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	39,939	4.6%	-0.6%	8,752,494	12.5%	0.1%
Employment	334,983	9.2%	-6.1%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$33,236	11.9%	2.1%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

NEBRASKA • Nebraska's bioscience industry is diverse, sizable, and growing. The state has added nearly 7 percent to its industry employment base since 2007, a period which includes the deep national recession. Three of its five major subsectors have a specialized employment concentration—agricultural feedstock and chemicals (location quotient of 4.90); bioscience-related distribution (LQ of 1.81); and medical devices (LQ of 1.64).



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Nebraska	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	14,978	1,605,533	III
Bioscience Industry Location Quotient	1.35	n/a	I
Biosciences Industry Establishments	910	70,006	III

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Nebraska Highlights:

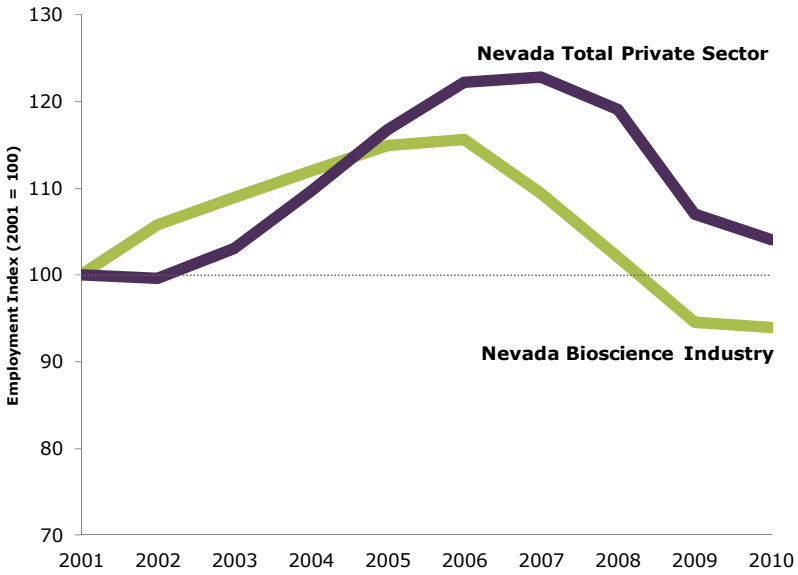
INDUSTRY SUBSECTOR	Nebraska 2010	Nebraska 2001–10 Change	Nebraska 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	49	34.9%	-14.0%	1,760	2.2%	4.5%
Employment	2,464	86.2%	5.7%	72,988	-5.9%	-5.5%
Location Quotient	4.90			n/a		
Direct-Effect Employment Multiplier	3.3			5.6		
Total Employment Impact	8,240			405,197		
Average Annual Wage (constant 2010 dollars)	$55,806	0.8%	-5.1%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	22	-12.0%	10.0%	2,908	11.3%	6.5%
Employment	1,646	-3.5%	-12.5%	296,759	-3.1%	-7.0%
Location Quotient	0.80			n/a		
Direct-Effect Employment Multiplier	2.8			5.3		
Total Employment Impact	4,662			1,464,492		
Average Annual Wage (constant 2010 dollars)	$67,565	11.0%	12.4%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	26	-8.0%	-13.3%	6,957	11.7%	7.7%
Employment	3,873	-1.7%	24.6%	343,468	-0.3%	-0.8%
Location Quotient	1.64			n/a		
Direct-Effect Employment Multiplier	1.8			2.9		
Total Employment Impact	6,855			956,767		
Average Annual Wage (constant 2010 dollars)	$49,135	10.3%	-3.7%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	91	59.5%	3.7%	22,212	48.9%	20.1%
Employment	1,492	12.7%	-8.3%	451,923	23.8%	6.1%
Location Quotient	0.48			n/a		
Direct-Effect Employment Multiplier	1.8			2.6		
Total Employment Impact	2,662			1,178,741		
Average Annual Wage (constant 2010 dollars)	$61,565	21.1%	8.7%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	722	25.0%	16.7%	36,170	-1.1%	-0.3%
Employment	5,503	-5.6%	7.5%	440,394	6.0%	-4.2%
Location Quotient	1.81			n/a		
Direct-Effect Employment Multiplier	1.9			2.4		
Total Employment Impact Multiplier	10,369			1,046,594		
Average Annual Wage (constant 2010 dollars)	$55,966	16.4%	3.4%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	910	25.6%	11.9%	70,006	12.8%	6.7%
Employment	14,978	6.1%	6.5%	1,605,533	6.4%	-1.4%
Location Quotient	1.35			n/a		
Direct-Effect Employment Multiplier	2.2			3.2		
Total Employment Impact	32,788			5,051,791		
Average Annual Wage (constant 2010 dollars)	$56,006	13.0%	1.3%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	56,046	13.3%	1.7%	8,752,494	12.5%	0.1%
Employment	736,840	0.2%	-3.3%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$40,866	6.3%	0.0%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

NEVADA • The Nevada bioscience industry employs nearly 5,000 across 352 business establishments. Its largest major subsector, research, testing, and medical labs, represents about half of these jobs at 2,400 in 2010. Average annual wages in the state industry are just over $60,000 or 58 percent higher than the average for the overall Nevada private sector.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Nevada	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	4,979	1,605,533	V
Bioscience Industry Location Quotient	0.35	n/a	V
Biosciences Industry Establishments	352	70,006	IV

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Nevada Highlights:

INDUSTRY SUBSECTOR	Nevada			United States		
	2010	2001–10 Change	2007–10 Change	2010	2001–10 Change	2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	8	192.7%	-20.0%	1,760	2.2%	4.5%
Employment	85	123.5%	-20.8%	72,988	-5.9%	-5.5%
Location Quotient	0.13			n/a		
Direct-Effect Employment Multiplier	3.4			5.6		
Total Employment Impact	288			405,197		
Average Annual Wage (constant 2010 dollars)	$55,068	-9.1%	-8.5%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	19	11.8%	-17.4%	2,908	11.3%	6.5%
Employment	459	33.8%	-5.4%	296,759	-3.1%	-7.0%
Location Quotient	0.17			n/a		
Direct-Effect Employment Multiplier	3.0			5.3		
Total Employment Impact	1,358			1,464,492		
Average Annual Wage (constant 2010 dollars)	$45,838	-18.3%	1.5%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	30	11.1%	15.4%	6,957	11.7%	7.7%
Employment	535	-0.7%	32.6%	343,468	-0.3%	-0.8%
Location Quotient	0.17			n/a		
Direct-Effect Employment Multiplier	2.0			2.9		
Total Employment Impact	1,089			956,767		
Average Annual Wage (constant 2010 dollars)	$60,167	2.0%	-3.0%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	164	45.1%	12.1%	22,212	48.9%	20.1%
Employment	2,408	-13.5%	-23.5%	451,923	23.8%	6.1%
Location Quotient	0.59			n/a		
Direct-Effect Employment Multiplier	2.1			2.6		
Total Employment Impact	5,131			1,178,741		
Average Annual Wage (constant 2010 dollars)	$64,687	14.8%	-6.8%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	132	-14.8%	0.4%	36,170	-1.1%	-0.3%
Employment	1,493	-6.7%	-10.3%	440,394	6.0%	-4.2%
Location Quotient	0.38			n/a		
Direct-Effect Employment Multiplier	2.1			2.4		
Total Employment Impact Multiplier	3,147			1,046,594		
Average Annual Wage (constant 2010 dollars)	$57,143	0.0%	-12.1%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	352	12.2%	4.8%	70,006	12.8%	6.7%
Employment	4,979	-6.1%	-14.2%	1,605,533	6.4%	-1.4%
Location Quotient	0.35			n/a		
Direct-Effect Employment Multiplier	2.2			3.2		
Total Employment Impact	11,014			5,051,791		
Average Annual Wage (constant 2010 dollars)	$60,038	5.6%	-8.2%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	70,879	42.6%	-4.1%	8,752,494	12.5%	0.1%
Employment	958,130	4.0%	-15.3%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$38,028	3.2%	-5.6%	$46,317	4.4%	-0.4%

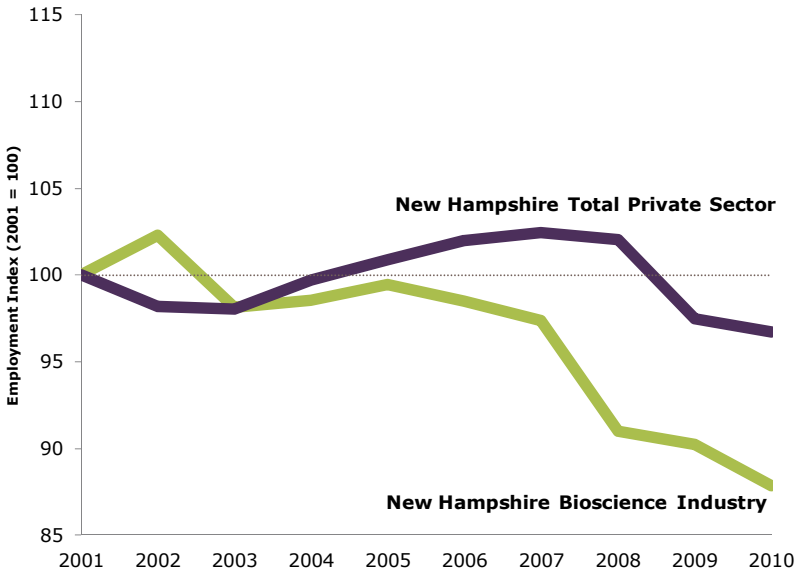
Note: U.S. employment metrics include Puerto Rico. Estimates of total employment impacts do not include Puerto Rico.

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

NEW HAMPSHIRE •

New Hampshire's bioscience industry employs more than 5,100 spanning 258 business establishments and featuring a specialized employment concentration in the medical device and equipment subsector. The state subsector employs 2,597 with a location quotient of 1.57 in 2010. Medical device manufacturers employ half of the New Hampshire bioscience industry.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	New Hampshire	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	5,143	1,605,533	IV
Bioscience Industry Location Quotient	0.67	n/a	IV
Biosciences Industry Establishments	258	70,006	V

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

New Hampshire Highlights:

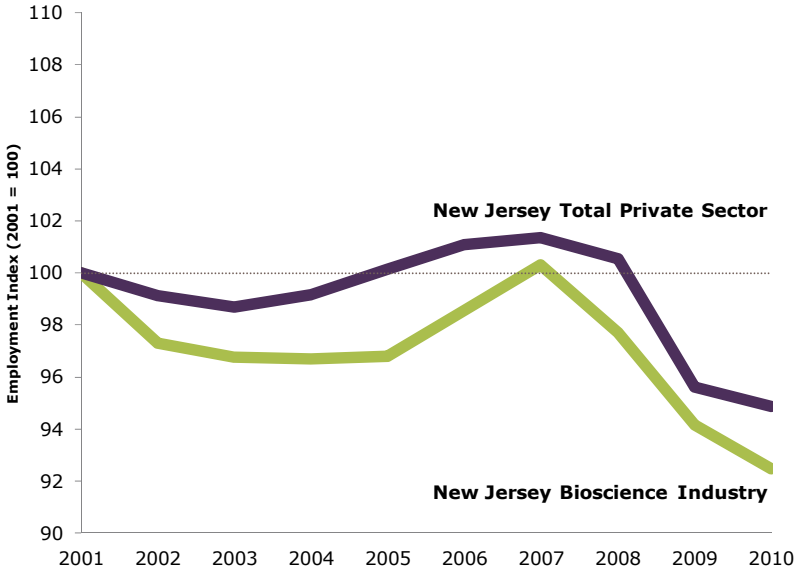
INDUSTRY SUBSECTOR	New Hampshire 2010	New Hampshire 2001–10 Change	New Hampshire 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	3	-45.5%	130.8%	1,760	2.2%	4.5%
Employment	14	223.4%	435.9%	72,988	-5.9%	-5.5%
Location Quotient	0.04			n/a		
Direct-Effect Employment Multiplier	1.0			5.6		
Total Employment Impact	14			405,197		
Average Annual Wage (constant 2010 dollars)	$38,363	2.8%	-47.4%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	11	37.5%	-8.3%	2,908	11.3%	6.5%
Employment	917	35.1%	-1.9%	296,759	-3.1%	-7.0%
Location Quotient	0.64			n/a		
Direct-Effect Employment Multiplier	3.5			5.3		
Total Employment Impact	3,181			1,464,492		
Average Annual Wage (constant 2010 dollars)	$66,315	15.5%	-2.3%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	63	27.3%	10.5%	6,957	11.7%	7.7%
Employment	2,597	-8.8%	-18.1%	343,468	-0.3%	-0.8%
Location Quotient	1.57			n/a		
Direct-Effect Employment Multiplier	2.3			2.9		
Total Employment Impact	5,972			956,767		
Average Annual Wage (constant 2010 dollars)	$59,548	23.5%	-5.5%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	96	-9.4%	13.4%	22,212	48.9%	20.1%
Employment	878	-30.2%	8.8%	451,923	23.8%	6.1%
Location Quotient	0.40			n/a		
Direct-Effect Employment Multiplier	2.6			2.6		
Total Employment Impact	2,305			1,178,741		
Average Annual Wage (constant 2010 dollars)	$84,909	26.5%	3.8%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	84	-4.4%	8.2%	36,170	-1.1%	-0.3%
Employment	737	-30.8%	-6.0%	440,394	6.0%	-4.2%
Location Quotient	0.35			n/a		
Direct-Effect Employment Multiplier	2.4			2.4		
Total Employment Impact Multiplier	1,796			1,046,594		
Average Annual Wage (constant 2010 dollars)	$72,024	4.1%	-8.8%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	258	0.0%	10.5%	70,006	12.8%	6.7%
Employment	5,143	-12.1%	-9.8%	1,605,533	6.4%	-1.4%
Location Quotient	0.67			n/a		
Direct-Effect Employment Multiplier	2.6			3.2		
Total Employment Impact	13,268			5,051,791		
Average Annual Wage (constant 2010 dollars)	$66,813	16.9%	-2.7%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	45,756	3.6%	-2.2%	8,752,494	12.5%	0.1%
Employment	513,524	-3.3%	-5.6%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$36,684	4.5%	-0.7%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

NEW JERSEY • New Jersey is a leading state in the biosciences with more than 91,000 employed in 2010 across 2,554 business establishments. The state sector is highly specialized overall and diverse, recognized in this report as one of just two states to have a specialized employment concentration in four of five major subsectors. These include: drugs and pharmaceuticals; research, testing, and medical labs; bioscience-related distribution; and medical devices.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	New Jersey	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	91,167	1,605,533	I
Bioscience Industry Location Quotient	1.93	n/a	I
Biosciences Industry Establishments	2,554	70,006	I

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

New Jersey Highlights:

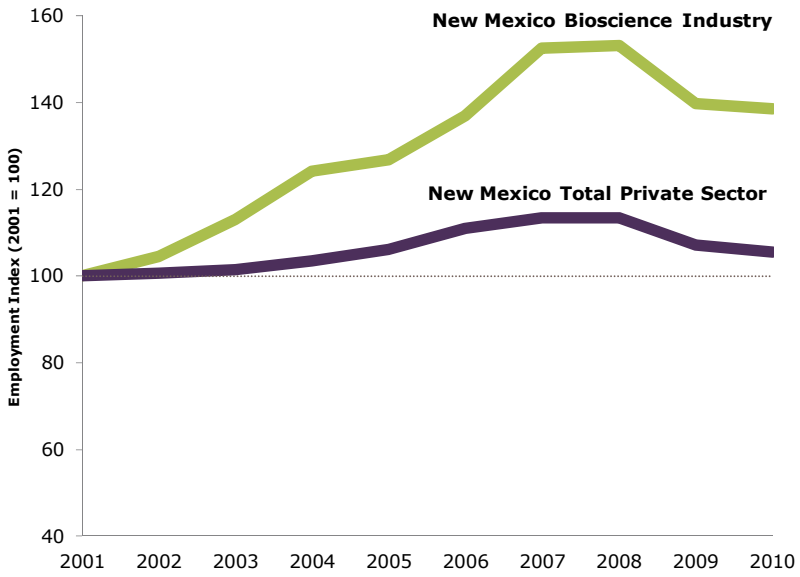
INDUSTRY SUBSECTOR	New Jersey 2010	New Jersey 2001–10 Change	New Jersey 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	21	-16.0%	-4.5%	1,760	2.2%	4.5%
Employment	569	58.7%	35.6%	72,988	-5.9%	-5.5%
Location Quotient	0.27			n/a		
Direct-Effect Employment Multiplier	6.2			5.6		
Total Employment Impact	3,552			405,197		
Average Annual Wage (constant 2010 dollars)	$95,880	50.3%	18.2%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	253	24.6%	2.8%	2,908	11.3%	6.5%
Employment	32,794	-13.5%	-22.4%	296,759	-3.1%	-7.0%
Location Quotient	3.77			n/a		
Direct-Effect Employment Multiplier	6.9			5.3		
Total Employment Impact	225,547			1,464,492		
Average Annual Wage (constant 2010 dollars)	$143,184	40.1%	9.7%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	293	20.1%	14.0%	6,957	11.7%	7.7%
Employment	13,148	-3.6%	4.7%	343,468	-0.3%	-0.8%
Location Quotient	1.30			n/a		
Direct-Effect Employment Multiplier	3.0			2.9		
Total Employment Impact	39,470			956,767		
Average Annual Wage (constant 2010 dollars)	$93,696	21.7%	1.6%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	896	54.4%	17.4%	22,212	48.9%	20.1%
Employment	26,721	3.0%	6.9%	451,923	23.8%	6.1%
Location Quotient	2.02			n/a		
Direct-Effect Employment Multiplier	2.9			2.6		
Total Employment Impact	78,097			1,178,741		
Average Annual Wage (constant 2010 dollars)	$108,361	12.1%	1.4%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	1,091	29.0%	9.7%	36,170	-1.1%	-0.3%
Employment	17,935	-13.3%	-3.9%	440,394	6.0%	-4.2%
Location Quotient	1.39			n/a		
Direct-Effect Employment Multiplier	2.6			2.4		
Total Employment Impact Multiplier	47,253			1,046,594		
Average Annual Wage (constant 2010 dollars)	$116,326	6.5%	14.2%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	2,554	34.6%	11.9%	70,006	12.8%	6.7%
Employment	91,167	-7.5%	-7.8%	1,605,533	6.4%	-1.4%
Location Quotient	1.94			n/a		
Direct-Effect Employment Multiplier	4.3			3.2		
Total Employment Impact	393,918			5,051,791		
Average Annual Wage (constant 2010 dollars)	$120,261	22.0%	5.5%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	261,477	3.8%	-1.6%	8,752,494	12.5%	0.1%
Employment	3,136,163	-5.1%	-6.4%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$46,281	2.5%	-1.1%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

NEW MEXICO • New Mexico's bioscience industry employs more than 7,400 across 526 business establishments. About two in three state bioscience jobs are in the research, testing, and medical labs subsector in which the state has a specialized employment concentration with a location quotient of 2.03 in 2010. This subsector has increased employment steadily over the decade, adding 67 percent to its base since 2001 and continuing growth since 2007.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	New Mexico	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	7,443	1,605,533	IV
Bioscience Industry Location Quotient	0.84	n/a	III
Biosciences Industry Establishments	526	70,006	IV

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

New Mexico Highlights:

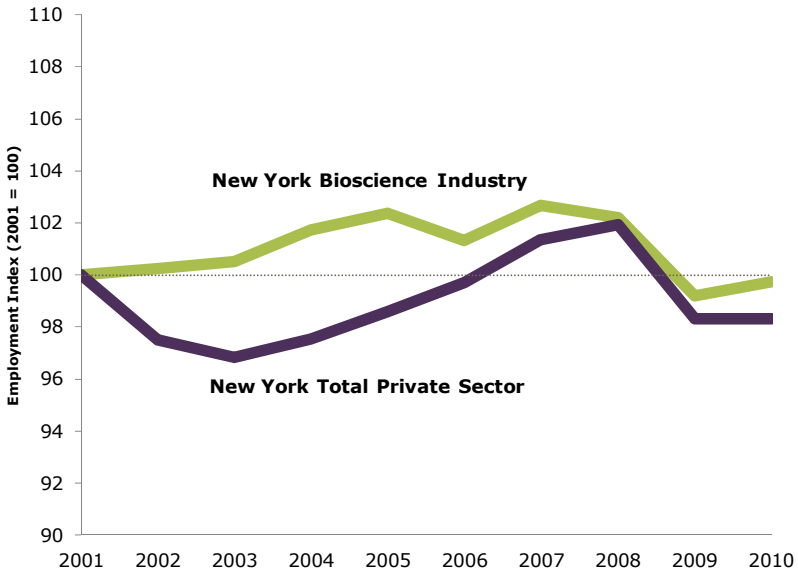
INDUSTRY SUBSECTOR	New Mexico 2010	New Mexico 2001–10 Change	New Mexico 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	9	5.9%	12.5%	1,760	2.2%	4.5%
Employment	85	28.7%	1.2%	72,988	-5.9%	-5.5%
Location Quotient	0.21			n/a		
Direct-Effect Employment Multiplier	4.0			5.6		
Total Employment Impact	344			405,197		
Average Annual Wage (constant 2010 dollars)	$48,767	81.0%	-2.8%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	11	10.0%	0.0%	2,908	11.3%	6.5%
Employment	528	50.9%	-19.6%	296,759	-3.1%	-7.0%
Location Quotient	0.32			n/a		
Direct-Effect Employment Multiplier	3.1			5.3		
Total Employment Impact	1,633			1,464,492		
Average Annual Wage (constant 2010 dollars)	$51,688	1.4%	-4.5%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	25	12.5%	-13.8%	6,957	11.7%	7.7%
Employment	283	-15.1%	-65.9%	343,468	-0.3%	-0.8%
Location Quotient	0.15			n/a		
Direct-Effect Employment Multiplier	1.8			2.9		
Total Employment Impact	501			956,767		
Average Annual Wage (constant 2010 dollars)	$42,755	-0.9%	-20.2%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	150	23.0%	18.3%	22,212	48.9%	20.1%
Employment	5,098	67.4%	6.2%	451,923	23.8%	6.1%
Location Quotient	2.03			n/a		
Direct-Effect Employment Multiplier	2.5			2.6		
Total Employment Impact	12,496			1,178,741		
Average Annual Wage (constant 2010 dollars)	$74,668	21.7%	2.6%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	331	22.6%	-1.5%	36,170	-1.1%	-0.3%
Employment	1,449	-8.3%	-20.6%	440,394	6.0%	-4.2%
Location Quotient	0.59			n/a		
Direct-Effect Employment Multiplier	2.0			2.4		
Total Employment Impact Multiplier	2,825			1,046,594		
Average Annual Wage (constant 2010 dollars)	$69,108	25.0%	12.4%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	526	21.6%	3.0%	70,006	12.8%	6.7%
Employment	7,443	38.5%	-9.2%	1,605,533	6.4%	-1.4%
Location Quotient	0.84			n/a		
Direct-Effect Employment Multiplier	2.4			3.2		
Total Employment Impact	17,799			5,051,791		
Average Annual Wage (constant 2010 dollars)	$70,448	22.9%	5.8%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	51,089	12.8%	2.0%	8,752,494	12.5%	0.1%
Employment	592,878	5.4%	-7.0%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$55,724	11.3%	2.5%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

NEW YORK • New York has a large and varied bioscience industry with no one industry subsector demonstrating a specialized employment concentration but with four of the five major components having more than 13,000 jobs each. The state's largest subsector, research, testing, and medical labs, has increased employment by 12 percent since 2001 and maintained growth even through the more difficult economic period since 2007. The state has a well concentrated drugs and pharmaceuticals subsector with just over 20,000 jobs.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	New York	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	74,873	1,605,533	I
Bioscience Industry Location Quotient	0.72	n/a	III
Biosciences Industry Establishments	2,948	70,006	I

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

New York Highlights:

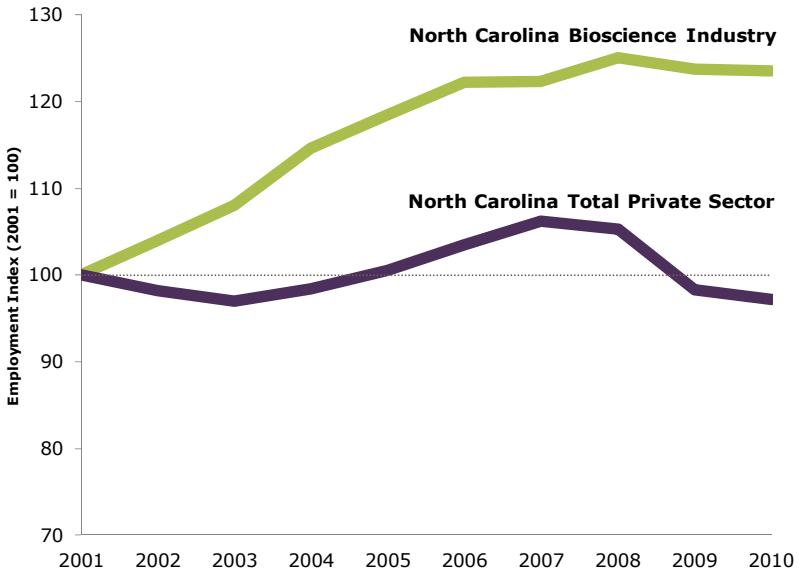
INDUSTRY SUBSECTOR	New York 2010	New York 2001–10 Change	New York 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	41	-13.4%	0.0%	1,760	2.2%	4.5%
Employment	1,573	84.1%	50.9%	72,988	-5.9%	-5.5%
Location Quotient	0.33			n/a		
Direct-Effect Employment Multiplier	2.5			5.6		
Total Employment Impact	3,985			405,197		
Average Annual Wage (constant 2010 dollars)	$69,487	29.7%	5.0%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	162	5.2%	-5.3%	2,908	11.3%	6.5%
Employment	20,070	-2.8%	-7.6%	296,759	-3.1%	-7.0%
Location Quotient	1.05			n/a		
Direct-Effect Employment Multiplier	3.4			5.3		
Total Employment Impact	67,612			1,464,492		
Average Annual Wage (constant 2010 dollars)	$77,108	6.5%	4.8%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	364	20.9%	-1.1%	6,957	11.7%	7.7%
Employment	13,135	-12.6%	-13.2%	343,468	-0.3%	-0.8%
Location Quotient	0.59			n/a		
Direct-Effect Employment Multiplier	2.1			2.9		
Total Employment Impact	27,621			956,767		
Average Annual Wage (constant 2010 dollars)	$60,531	6.2%	-5.8%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	1,009	31.9%	10.2%	22,212	48.9%	20.1%
Employment	23,599	12.3%	8.6%	451,923	23.8%	6.1%
Location Quotient	0.81			n/a		
Direct-Effect Employment Multiplier	1.9			2.6		
Total Employment Impact	45,172			1,178,741		
Average Annual Wage (constant 2010 dollars)	$72,526	11.9%	5.5%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	1,372	3.5%	0.0%	36,170	-1.1%	-0.3%
Employment	16,495	-5.9%	-5.4%	440,394	6.0%	-4.2%
Location Quotient	0.58			n/a		
Direct-Effect Employment Multiplier	2.1			2.4		
Total Employment Impact Multiplier	35,083			1,046,594		
Average Annual Wage (constant 2010 dollars)	$82,813	11.2%	1.9%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	2,948	13.7%	2.8%	70,006	12.8%	6.7%
Employment	74,873	-0.3%	-2.9%	1,605,533	6.4%	-1.4%
Location Quotient	0.72			n/a		
Direct-Effect Employment Multiplier	2.4			3.2		
Total Employment Impact	179,472			5,051,791		
Average Annual Wage (constant 2010 dollars)	$73,852	9.5%	2.5%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	575,890	8.6%	2.0%	8,752,494	12.5%	0.1%
Employment	6,907,058	-1.7%	-3.0%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$37,921	4.9%	-4.6%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

NORTH CAROLINA • North Carolina maintains a large, specialized, varied, and growing bioscience industry. It is one of 11 states and Puerto Rico to claim a specialized employment concentration in three of the five major industry subsectors. These include: drugs and pharmaceuticals; research, testing, and medical labs; and agricultural feedstock and chemicals. Overall, the industry has grown at a rapid pace over the decade, increasing employment by nearly 24 percent since 2001.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	North Carolina	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	62,386	1,605,533	I
Bioscience Industry Location Quotient	1.34	n/a	I
Biosciences Industry Establishments	2,509	70,006	I

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

North Carolina Highlights:

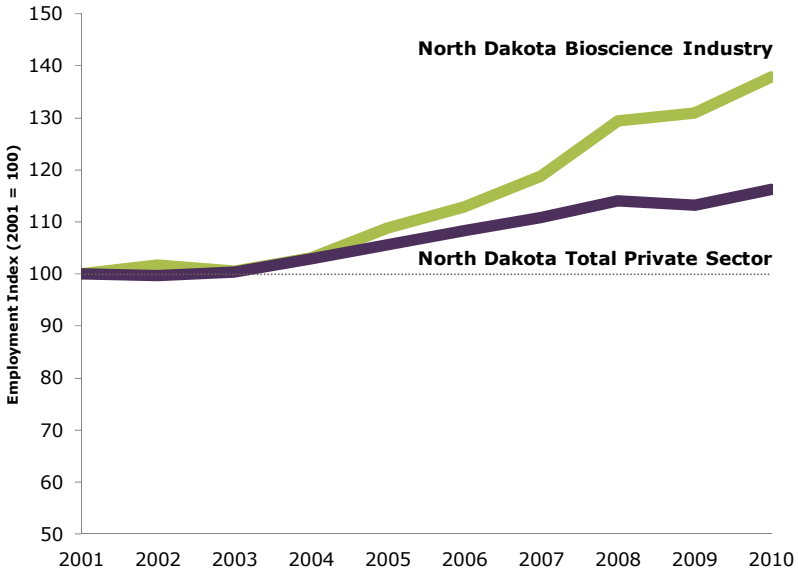
INDUSTRY SUBSECTOR	North Carolina 2010	North Carolina 2001–10 Change	North Carolina 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	43	-12.3%	7.5%	1,760	2.2%	4.5%
Employment	2,540	-33.0%	-23.0%	72,988	-5.9%	-5.5%
Location Quotient	1.20			n/a		
Direct-Effect Employment Multiplier	5.9			5.6		
Total Employment Impact	14,913			405,197		
Average Annual Wage (constant 2010 dollars)	$84,334	4.0%	8.5%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	108	35.0%	35.0%	2,908	11.3%	6.5%
Employment	20,120	7.1%	4.6%	296,759	-3.1%	-7.0%
Location Quotient	2.34			n/a		
Direct-Effect Employment Multiplier	5.2			5.3		
Total Employment Impact	104,874			1,464,492		
Average Annual Wage (constant 2010 dollars)	$89,592	6.7%	-4.4%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	175	42.3%	12.9%	6,957	11.7%	7.7%
Employment	8,236	20.3%	12.0%	343,468	-0.3%	-0.8%
Location Quotient	0.83			n/a		
Direct-Effect Employment Multiplier	2.4			2.9		
Total Employment Impact	19,664			956,767		
Average Annual Wage (constant 2010 dollars)	$53,875	12.4%	0.6%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	954	100.3%	60.4%	22,212	48.9%	20.1%
Employment	18,168	81.3%	11.4%	451,923	23.8%	6.1%
Location Quotient	1.39			n/a		
Direct-Effect Employment Multiplier	2.5			2.6		
Total Employment Impact	45,885			1,178,741		
Average Annual Wage (constant 2010 dollars)	$80,595	23.3%	6.1%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	1,229	17.5%	27.9%	36,170	-1.1%	-0.3%
Employment	13,322	20.4%	-14.6%	440,394	6.0%	-4.2%
Location Quotient	1.04			n/a		
Direct-Effect Employment Multiplier	2.3			2.4		
Total Employment Impact Multiplier	30,852			1,046,594		
Average Annual Wage (constant 2010 dollars)	$72,289	10.2%	11.0%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	2,509	41.4%	37.1%	70,006	12.8%	6.7%
Employment	62,386	23.5%	1.0%	1,605,533	6.4%	-1.4%
Location Quotient	1.34			n/a		
Direct-Effect Employment Multiplier	3.5			3.2		
Total Employment Impact	216,188			5,051,791		
Average Annual Wage (constant 2010 dollars)	$78,348	10.1%	2.8%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	243,640	12.9%	-0.4%	8,752,494	12.5%	0.1%
Employment	3,101,379	-2.8%	-8.5%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$40,900	4.0%	0.6%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

NORTH DAKOTA • North Dakota's bioscience industry employs more than 3,600 in jobs that span 401 business establishments. Though modest in size, the state has a specialized employment concentration in two of the five major subsectors—agricultural feedstock and chemicals and bioscience-related distribution. Overall, the state has experienced steady growth in the biosciences, adding 38 percent to its employment base since 2001.



Bioscience Employment Tier

V

I II III IV V

Summary of State Performance in Industry Related Metrics

Metrics	North Dakota	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	3,638	1,605,533	V
Bioscience Industry Location Quotient	0.83	n/a	III
Biosciences Industry Establishments	401	70,006	IV

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

North Dakota Highlights:

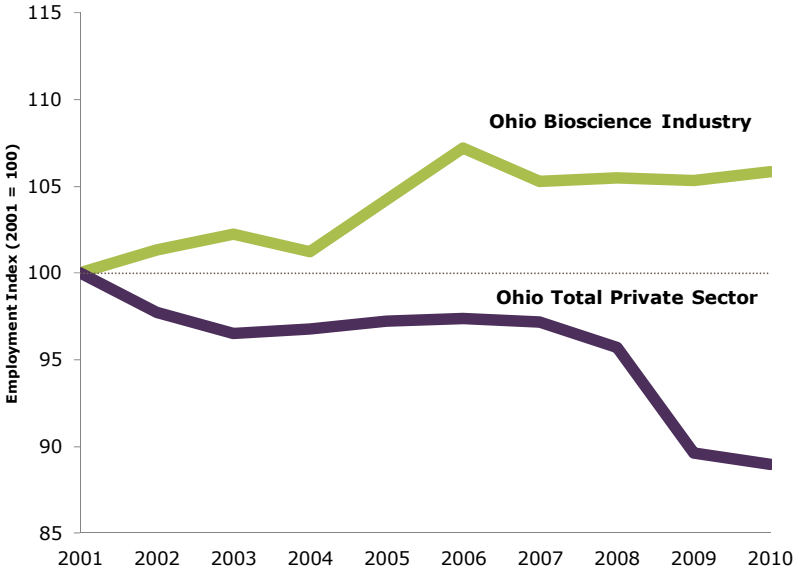
INDUSTRY SUBSECTOR	North Dakota 2010	North Dakota 2001–10 Change	North Dakota 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	17	54.9%	41.7%	1,760	2.2%	4.5%
Employment	510	25.3%	8.2%	72,988	-5.9%	-5.5%
Location Quotient	2.56			n/a		
Direct-Effect Employment Multiplier	3.8			5.6		
Total Employment Impact	1,957			405,197		
Average Annual Wage (constant 2010 dollars)	$58,441	9.1%	7.9%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	0	0.0%	0.0%	2,908	11.3%	6.5%
Employment	0	0.0%	0.0%	296,759	-3.1%	-7.0%
Location Quotient	0.00			n/a		
Direct-Effect Employment Multiplier	0.0			5.3		
Total Employment Impact	0			1,464,492		
Average Annual Wage (constant 2010 dollars)	$0	0.0%	0.0%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	4	361.5%	-33.3%	6,957	11.7%	7.7%
Employment	39	-1.7%	-20.4%	343,468	-0.3%	-0.8%
Location Quotient	0.04			n/a		
Direct-Effect Employment Multiplier	1.4			2.9		
Total Employment Impact	56			956,767		
Average Annual Wage (constant 2010 dollars)	$46,052	-5.1%	35.4%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	56	65.9%	43.0%	22,212	48.9%	20.1%
Employment	698	165.1%	41.4%	451,923	23.8%	6.1%
Location Quotient	0.57			n/a		
Direct-Effect Employment Multiplier	1.7			2.6		
Total Employment Impact	1,154			1,178,741		
Average Annual Wage (constant 2010 dollars)	$42,235	13.0%	8.6%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	324	36.6%	8.7%	36,170	-1.1%	-0.3%
Employment	2,391	23.9%	12.7%	440,394	6.0%	-4.2%
Location Quotient	1.99			n/a		
Direct-Effect Employment Multiplier	1.7			2.4		
Total Employment Impact Multiplier	4,103			1,046,594		
Average Annual Wage (constant 2010 dollars)	$52,538	27.7%	8.2%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	401	41.8%	12.9%	70,006	12.8%	6.7%
Employment	3,638	37.8%	16.0%	1,605,533	6.4%	-1.4%
Location Quotient	0.83			n/a		
Direct-Effect Employment Multiplier	2.0			3.2		
Total Employment Impact	7,270			5,051,791		
Average Annual Wage (constant 2010 dollars)	$51,319	19.9%	7.7%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	23,924	11.8%	4.4%	8,752,494	12.5%	0.1%
Employment	291,317	16.2%	4.9%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$61,559	22.0%	10.2%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

OHIO • Ohio has a sizable and growing bioscience industry with 47,536 jobs that span 2,564 business establishments. Four of the state's five major subsectors have added jobs overall since 2001 including: research, testing, and medical labs (up 40 percent since 2001); drugs and pharmaceuticals (up 21 percent); bioscience-related distribution (up 5 percent); and agricultural feedstock and chemicals (up 4 percent). Ohio's agricultural biosciences subsector is nearly specialized in its employment concentration with a location quotient of 1.18 in 2010.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Ohio	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	47,536	1,605,533	II
Bioscience Industry Location Quotient	0.76	n/a	III
Biosciences Industry Establishments	2,564	70,006	I

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Ohio Highlights:

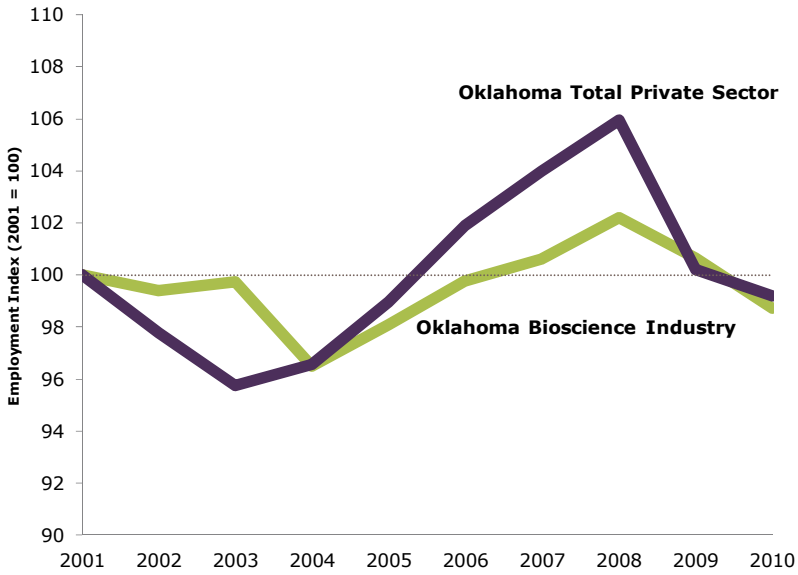
INDUSTRY SUBSECTOR	Ohio			United States		
	2010	2001–10 Change	2007–10 Change	2010	2001–10 Change	2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	70	59.8%	52.8%	1,760	2.2%	4.5%
Employment	3,371	4.1%	16.4%	72,988	-5.9%	-5.5%
Location Quotient	1.18			n/a		
Direct-Effect Employment Multiplier	7.5			5.6		
Total Employment Impact	25,125			405,197		
Average Annual Wage (constant 2010 dollars)	$80,830	20.0%	6.5%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	39	-27.8%	-4.9%	2,908	11.3%	6.5%
Employment	5,308	21.2%	4.6%	296,759	-3.1%	-7.0%
Location Quotient	0.46			n/a		
Direct-Effect Employment Multiplier	4.6			5.3		
Total Employment Impact	24,163			1,464,492		
Average Annual Wage (constant 2010 dollars)	$65,757	-4.6%	1.0%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	218	-7.6%	4.3%	6,957	11.7%	7.7%
Employment	8,564	-25.0%	3.9%	343,468	-0.3%	-0.8%
Location Quotient	0.64			n/a		
Direct-Effect Employment Multiplier	2.5			2.9		
Total Employment Impact	21,668			956,767		
Average Annual Wage (constant 2010 dollars)	$50,296	-8.0%	-0.5%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	779	49.4%	13.5%	22,212	48.9%	20.1%
Employment	12,320	40.1%	5.2%	451,923	23.8%	6.1%
Location Quotient	0.70			n/a		
Direct-Effect Employment Multiplier	2.5			2.6		
Total Employment Impact	30,843			1,178,741		
Average Annual Wage (constant 2010 dollars)	$65,399	5.1%	1.2%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	1,458	7.8%	-3.9%	36,170	-1.1%	-0.3%
Employment	17,973	5.3%	-7.1%	440,394	6.0%	-4.2%
Location Quotient	1.05			n/a		
Direct-Effect Employment Multiplier	2.5			2.4		
Total Employment Impact Multiplier	45,255			1,046,594		
Average Annual Wage (constant 2010 dollars)	$72,223	9.0%	-3.9%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	2,564	16.1%	2.6%	70,006	12.8%	6.7%
Employment	47,536	5.9%	0.5%	1,605,533	6.4%	-1.4%
Location Quotient	0.76			n/a		
Direct-Effect Employment Multiplier	3.1			3.2		
Total Employment Impact	147,054			5,051,791		
Average Annual Wage (constant 2010 dollars)	$66,393	5.6%	-1.2%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	270,904	-0.7%	-2.1%	8,752,494	12.5%	0.1%
Employment	4,169,671	-11.0%	-8.5%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$41,036	1.4%	-1.1%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

OKLAHOMA • Oklahoma's bioscience industry employment totaled more than 8,800 in 2010 and spans 1,055 business establishments. Its largest major subsector, bioscience-related distribution, has nearly 4,500 jobs and since 2001 has grown by 8 percent. In research, testing, and medical labs, the state has increased jobs since 2007 by 1 percent to 2,439 in 2010.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Oklahoma	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	8,815	1,605,533	IV
Bioscience Industry Location Quotient	0.51	n/a	V
Biosciences Industry Establishments	1,055	70,006	III

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Oklahoma Highlights:

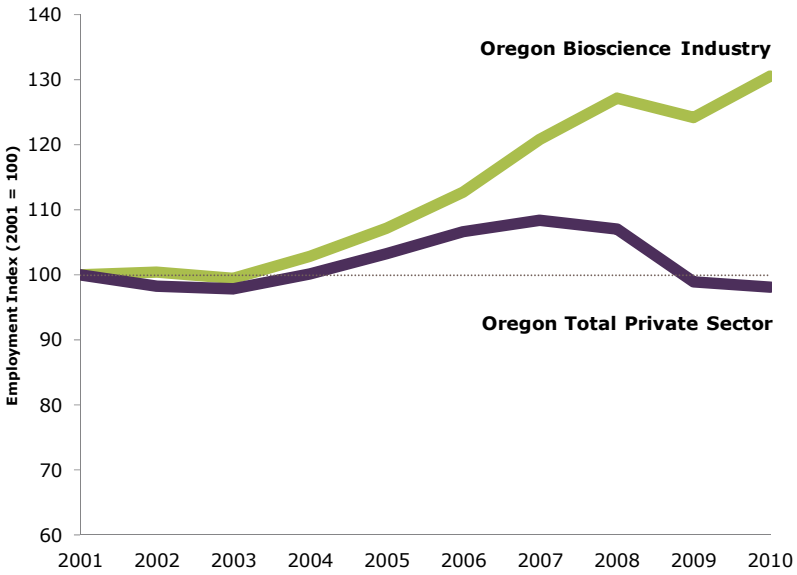
INDUSTRY SUBSECTOR	Oklahoma			United States		
	2010	2001–10 Change	2007–10 Change	2010	2001–10 Change	2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	14	-14.3%	0.0%	1,760	2.2%	4.5%
Employment	761	1.1%	38.3%	72,988	-5.9%	-5.5%
Location Quotient	0.96			n/a		
Direct-Effect Employment Multiplier	7.7			5.6		
Total Employment Impact	5,894			405,197		
Average Annual Wage (constant 2010 dollars)	$71,475	28.2%	11.2%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	25	8.7%	31.6%	2,908	11.3%	6.5%
Employment	215	-53.5%	55.8%	296,759	-3.1%	-7.0%
Location Quotient	0.07			n/a		
Direct-Effect Employment Multiplier	3.5			5.3		
Total Employment Impact	748			1,464,492		
Average Annual Wage (constant 2010 dollars)	$60,174	14.1%	-13.9%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	76	12.8%	-1.3%	6,957	11.7%	7.7%
Employment	911	-8.5%	-14.7%	343,468	-0.3%	-0.8%
Location Quotient	0.24			n/a		
Direct-Effect Employment Multiplier	2.0			2.9		
Total Employment Impact	1,857			956,767		
Average Annual Wage (constant 2010 dollars)	$54,320	25.0%	10.8%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	217	70.8%	20.9%	22,212	48.9%	20.1%
Employment	2,439	-5.1%	1.1%	451,923	23.8%	6.1%
Location Quotient	0.50			n/a		
Direct-Effect Employment Multiplier	2.0			2.6		
Total Employment Impact	4,988			1,178,741		
Average Annual Wage (constant 2010 dollars)	$51,827	5.6%	0.4%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	723	25.1%	-6.7%	36,170	-1.1%	-0.3%
Employment	4,489	8.3%	-6.7%	440,394	6.0%	-4.2%
Location Quotient	0.94			n/a		
Direct-Effect Employment Multiplier	2.2			2.4		
Total Employment Impact Multiplier	9,823			1,046,594		
Average Annual Wage (constant 2010 dollars)	$73,617	23.9%	1.7%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	1,055	30.0%	-0.9%	70,006	12.8%	6.7%
Employment	8,815	-1.3%	-1.9%	1,605,533	6.4%	-1.4%
Location Quotient	0.51			n/a		
Direct-Effect Employment Multiplier	2.6			3.2		
Total Employment Impact	23,310			5,051,791		
Average Annual Wage (constant 2010 dollars)	$65,081	20.5%	2.5%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	96,562	13.3%	3.0%	8,752,494	12.5%	0.1%
Employment	1,160,992	-0.8%	-4.6%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$38,021	11.8%	2.0%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

OREGON • Oregon's bioscience industry is sizable and growing at a rapid rate. Over the decade, the state increased employment in the biosciences by nearly 31 percent and maintained a growth trajectory even during the later, more difficult economic period of 2007 through 2010 (up 8 percent). Though Oregon does not have a specialized employment concentration in any one subsector, it is clearly emerging in each of the five major components with strong overall job gains since 2001 in each.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Oregon	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	13,423	1,605,533	III
Bioscience Industry Location Quotient	0.68	n/a	IV
Biosciences Industry Establishments	762	70,006	III

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Oregon Highlights:

INDUSTRY SUBSECTOR	Oregon			United States		
	2010	2001–10 Change	2007–10 Change	2010	2001–10 Change	2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	32	70.3%	6.7%	1,760	2.2%	4.5%
Employment	483	67.4%	-13.8%	72,988	-5.9%	-5.5%
Location Quotient	0.54			n/a		
Direct-Effect Employment Multiplier	4.7			5.6		
Total Employment Impact	2,261			405,197		
Average Annual Wage (constant 2010 dollars)	$54,743	13.3%	4.6%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	36	-5.3%	0.0%	2,908	11.3%	6.5%
Employment	873	14.1%	9.7%	296,759	-3.1%	-7.0%
Location Quotient	0.24			n/a		
Direct-Effect Employment Multiplier	2.9			5.3		
Total Employment Impact	2,548			1,464,492		
Average Annual Wage (constant 2010 dollars)	$46,338	-5.4%	16.2%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	112	9.8%	3.7%	6,957	11.7%	7.7%
Employment	3,962	31.3%	-3.0%	343,468	-0.3%	-0.8%
Location Quotient	0.94			n/a		
Direct-Effect Employment Multiplier	2.7			2.9		
Total Employment Impact	10,530			956,767		
Average Annual Wage (constant 2010 dollars)	$57,483	9.8%	-12.2%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	238	32.5%	18.6%	22,212	48.9%	20.1%
Employment	3,659	53.0%	29.6%	451,923	23.8%	6.1%
Location Quotient	0.66			n/a		
Direct-Effect Employment Multiplier	2.3			2.6		
Total Employment Impact	8,413			1,178,741		
Average Annual Wage (constant 2010 dollars)	$64,039	7.7%	-4.6%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	344	0.2%	0.4%	36,170	-1.1%	-0.3%
Employment	4,446	16.5%	7.0%	440,394	6.0%	-4.2%
Location Quotient	0.82			n/a		
Direct-Effect Employment Multiplier	2.5			2.4		
Total Employment Impact Multiplier	11,027			1,046,594		
Average Annual Wage (constant 2010 dollars)	$53,673	5.2%	7.4%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	762	11.8%	6.2%	70,006	12.8%	6.7%
Employment	13,423	30.6%	8.1%	1,605,533	6.4%	-1.4%
Location Quotient	0.68			n/a		
Direct-Effect Employment Multiplier	2.6			3.2		
Total Employment Impact	34,779			5,051,791		
Average Annual Wage (constant 2010 dollars)	$57,185	7.6%	-2.1%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	123,153	12.2%	-1.9%	8,752,494	12.5%	0.1%
Employment	1,318,305	-1.9%	-9.5%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$40,981	1.6%	-0.6%	$46,317	4.4%	-0.4%

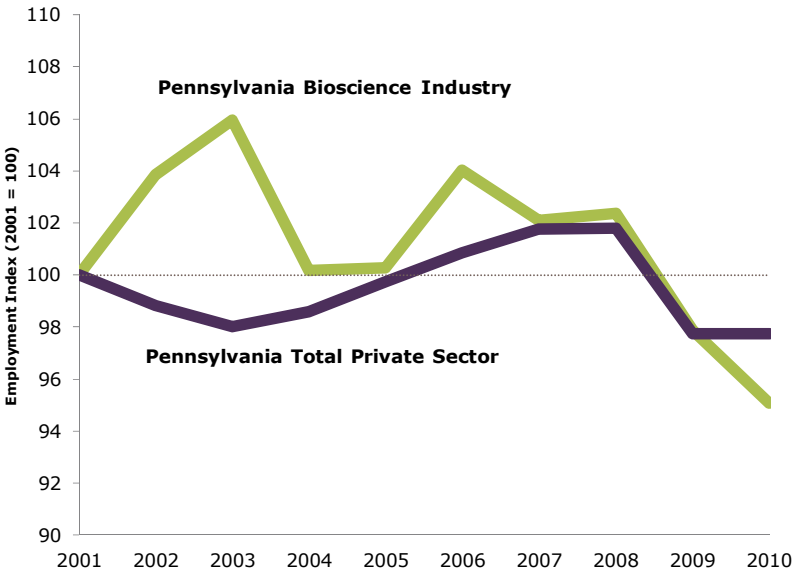
Note: U.S. employment metrics include Puerto Rico. Estimates of total employment impacts do not include Puerto Rico.

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

PENNSYLVANIA •

Pennsylvania has a large and highly concentrated bioscience industry with employment measuring nearly 82,000 in 2010 across 2,240 business establishments. The state sector is diverse with specialized employment concentrations in two of the five major subsectors—drugs and pharmaceuticals (location quotient of 1.62) and research, testing, and medical labs (LQ of 1.35). Medical device manufacturing is also highly concentrated in Pennsylvania with more than 16,000 jobs in 2010.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Pennsylvania	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	81,796	1,605,533	I
Bioscience Industry Location Quotient	1.15	n/a	II
Biosciences Industry Establishments	2,240	70,006	I

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Pennsylvania Highlights:

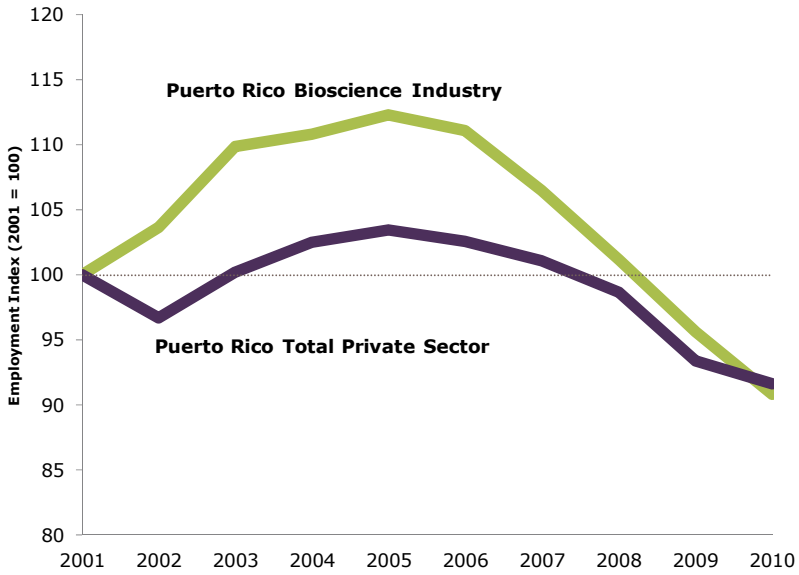
INDUSTRY SUBSECTOR	Pennsylvania 2010	Pennsylvania 2001–10 Change	Pennsylvania 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	41	-25.0%	0.0%	1,760	2.2%	4.5%
Employment	754	-28.7%	-48.0%	72,988	-5.9%	-5.5%
Location Quotient	0.23			n/a		
Direct-Effect Employment Multiplier	4.7			5.6		
Total Employment Impact	3,561			405,197		
Average Annual Wage (constant 2010 dollars)	$52,711	7.1%	-3.4%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	113	-8.9%	-4.2%	2,908	11.3%	6.5%
Employment	21,352	-17.2%	-3.4%	296,759	-3.1%	-7.0%
Location Quotient	1.62			n/a		
Direct-Effect Employment Multiplier	6.0			5.3		
Total Employment Impact	127,749			1,464,492		
Average Annual Wage (constant 2010 dollars)	$106,644	8.4%	2.2%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	289	-14.2%	-9.7%	6,957	11.7%	7.7%
Employment	16,054	-13.7%	-9.6%	343,468	-0.3%	-0.8%
Location Quotient	1.05			n/a		
Direct-Effect Employment Multiplier	2.9			2.9		
Total Employment Impact	46,880			956,767		
Average Annual Wage (constant 2010 dollars)	$60,578	13.1%	-0.3%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	971	27.7%	29.1%	22,212	48.9%	20.1%
Employment	26,976	21.5%	-7.3%	451,923	23.8%	6.1%
Location Quotient	1.35			n/a		
Direct-Effect Employment Multiplier	3.0			2.6		
Total Employment Impact	80,869			1,178,741		
Average Annual Wage (constant 2010 dollars)	$95,724	26.2%	4.0%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	826	-33.6%	-14.7%	36,170	-1.1%	-0.3%
Employment	16,661	-9.4%	-4.5%	440,394	6.0%	-4.2%
Location Quotient	0.85			n/a		
Direct-Effect Employment Multiplier	2.6			2.4		
Total Employment Impact Multiplier	43,064			1,046,594		
Average Annual Wage (constant 2010 dollars)	$92,894	15.4%	5.8%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	2,240	-11.1%	1.9%	70,006	12.8%	6.7%
Employment	81,796	-4.9%	-6.9%	1,605,533	6.4%	-1.4%
Location Quotient	1.15			n/a		
Direct-Effect Employment Multiplier	3.7			3.2		
Total Employment Impact	302,125			5,051,791		
Average Annual Wage (constant 2010 dollars)	$90,704	15.6%	3.8%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	326,490	1.5%	0.5%	8,752,494	12.5%	0.1%
Employment	4,740,935	-2.2%	-3.9%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$45,323	6.6%	0.4%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

PUERTO RICO • Puerto Rico has a highly specialized and diverse bioscience industry. It has the distinction, along with just two other states, of having a specialized employment concentration in four of the five major bioscience subsectors—drugs and pharmaceuticals; medical devices and equipment; bioscience-related distribution; and research, testing, and medical labs. Though bioscience industry employment has contracted overall, two subsectors have added jobs in Puerto Rico since 2007—bioscience-related distribution (up 7 percent) and research and testing (up 6 percent).



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Puerto Rico	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	41,230	1,605,533	II
Bioscience Industry Location Quotient	4.13	n/a	I
Biosciences Industry Establishments	1,019	70,006	III

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Puerto Rico Highlights:

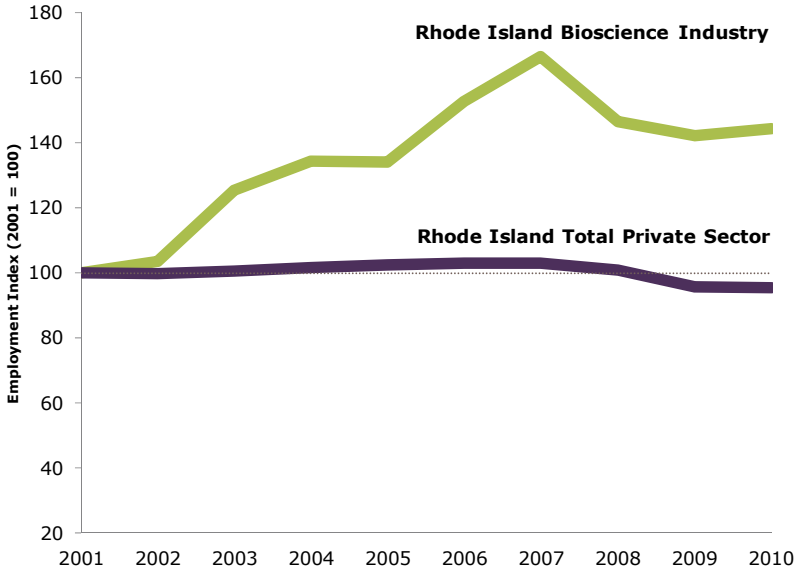
INDUSTRY SUBSECTOR	Puerto Rico 2010	Puerto Rico 2001–10 Change	Puerto Rico 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	n/a			1,760	2.2%	4.5%
Employment	n/a			72,988	-5.9%	-5.5%
Location Quotient	n/a			n/a		
Direct-Effect Employment Multiplier	n/a			5.6		
Total Employment Impact	n/a			405,197		
Average Annual Wage (constant 2010 dollars)	$n/a			$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	61	-24.7%	-37.1%	2,908	11.3%	6.5%
Employment	17,896	-27.4%	-27.1%	296,759	-3.1%	-7.0%
Location Quotient	9.69			n/a		
Direct-Effect Employment Multiplier	n/a			5.3		
Total Employment Impact	n/a			1,464,492		
Average Annual Wage (constant 2010 dollars)	$62,280	17.2%	0.8%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	59	-7.8%	-21.3%	6,957	11.7%	7.7%
Employment	12,912	13.3%	-7.9%	343,468	-0.3%	-0.8%
Location Quotient	6.04			n/a		
Direct-Effect Employment Multiplier	n/a			2.9		
Total Employment Impact	n/a			956,767		
Average Annual Wage (constant 2010 dollars)	$35,454	14.5%	3.1%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	621	28.1%	3.0%	22,212	48.9%	20.1%
Employment	4,416	24.4%	6.0%	451,923	23.8%	6.1%
Location Quotient	1.57			n/a		
Direct-Effect Employment Multiplier	n/a			2.6		
Total Employment Impact	n/a			1,178,741		
Average Annual Wage (constant 2010 dollars)	$24,471	17.2%	7.1%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	269	-13.2%	-21.3%	36,170	-1.1%	-0.3%
Employment	6,006	10.5%	7.2%	440,394	6.0%	-4.2%
Location Quotient	2.19			n/a		
Direct-Effect Employment Multiplier	n/a			2.4		
Total Employment Impact Multiplier	n/a			1,046,594		
Average Annual Wage (constant 2010 dollars)	$58,858	9.2%	5.5%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	1,019	8.0%	-9.6%	70,006	12.8%	6.7%
Employment	41,230	-9.1%	-14.7%	1,605,533	6.4%	-1.4%
Location Quotient	4.13			n/a		
Direct-Effect Employment Multiplier	n/a			3.2		
Total Employment Impact	n/a			5,051,791		
Average Annual Wage (constant 2010 dollars)	$49,331	9.1%	-1.0%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	47,347	-4.8%	-21.1%	8,752,494	12.5%	0.1%
Employment	665,148	-8.3%	-9.3%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$24,813	5.2%	1.9%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

RHODE ISLAND • Rhode Island's bioscience sector employs just over 4,600 in jobs that span 277 business establishments. Despite employment declines in the recent recession, the state's bioscience industry added 44 percent to its employment base overall since 2001. Its largest subsector, drugs and pharmaceuticals, has a specialized employment concentration with a location quotient of 1.25. The subsector emerged over the decade though has shed jobs in recent years.



Bioscience Employment Tier

V

I II III IV V

Summary of State Performance in Industry Related Metrics

Metrics	Rhode Island	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	4,602	1,605,533	V
Bioscience Industry Location Quotient	0.79	n/a	III
Biosciences Industry Establishments	277	70,006	V

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Rhode Island Highlights:

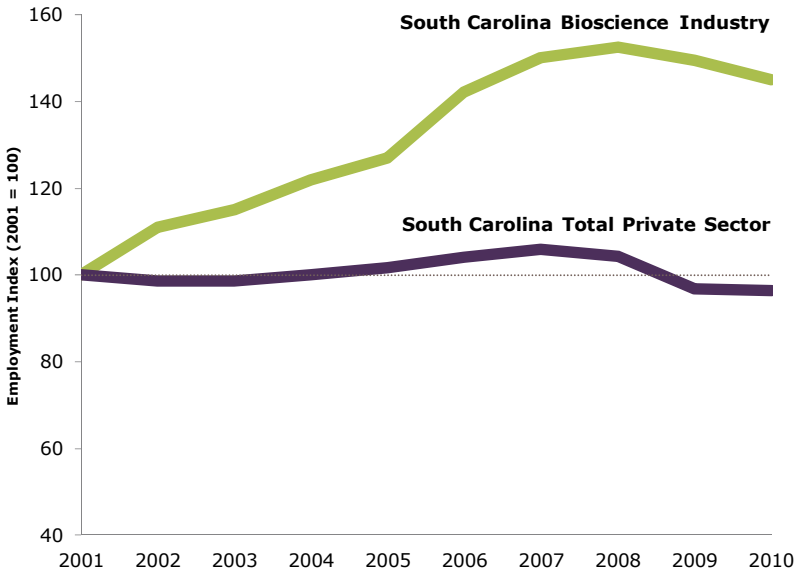
INDUSTRY SUBSECTOR	Rhode Island			United States		
	2010	2001–10 Change	2007–10 Change	2010	2001–10 Change	2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	0	-100.0%	-100.0%	1,760	2.2%	4.5%
Employment	0	-100.0%	-100.0%	72,988	-5.9%	-5.5%
Location Quotient	0.00			n/a		
Direct-Effect Employment Multiplier	0.0			5.6		
Total Employment Impact	0			405,197		
Average Annual Wage (constant 2010 dollars)	$0	-100.0%	-100.0%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	12	-7.7%	-29.4%	2,908	11.3%	6.5%
Employment	1,339	155.0%	-30.5%	296,759	-3.1%	-7.0%
Location Quotient	1.25			n/a		
Direct-Effect Employment Multiplier	3.4			5.3		
Total Employment Impact	4,616			1,464,492		
Average Annual Wage (constant 2010 dollars)	$91,479	36.1%	-5.2%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	38	6.7%	8.6%	6,957	11.7%	7.7%
Employment	1,311	21.3%	-12.1%	343,468	-0.3%	-0.8%
Location Quotient	1.05			n/a		
Direct-Effect Employment Multiplier	2.3			2.9		
Total Employment Impact	3,026			956,767		
Average Annual Wage (constant 2010 dollars)	$62,400	18.9%	2.6%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	90	67.4%	17.0%	22,212	48.9%	20.1%
Employment	809	34.3%	12.3%	451,923	23.8%	6.1%
Location Quotient	0.49			n/a		
Direct-Effect Employment Multiplier	2.0			2.6		
Total Employment Impact	1,580			1,178,741		
Average Annual Wage (constant 2010 dollars)	$64,351	24.9%	12.0%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	138	-33.9%	-7.8%	36,170	-1.1%	-0.3%
Employment	1,143	18.0%	-1.1%	440,394	6.0%	-4.2%
Location Quotient	0.72			n/a		
Direct-Effect Employment Multiplier	2.3			2.4		
Total Employment Impact Multiplier	2,625			1,046,594		
Average Annual Wage (constant 2010 dollars)	$74,630	-8.0%	0.5%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	277	-11.2%	-0.9%	70,006	12.8%	6.7%
Employment	4,602	44.3%	-13.4%	1,605,533	6.4%	-1.4%
Location Quotient	0.79			n/a		
Direct-Effect Employment Multiplier	2.6			3.2		
Total Employment Impact	11,847			5,051,791		
Average Annual Wage (constant 2010 dollars)	$74,242	17.1%	-2.6%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	34,387	4.3%	-2.9%	8,752,494	12.5%	0.1%
Employment	387,004	-4.4%	-7.4%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$42,532	7.3%	1.5%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

SOUTH CAROLINA • South Carolina's bioscience industry has emerged over the decade with strong employment growth, adding 45 percent to its employment base since 2001. Despite a slowdown and modest job losses in recent years, the state industry now employs nearly 15,000 across 985 business establishments. South Carolina is developing a diverse sector with four of the five major subsectors now employing more than 3,000. Its largest subsector, medical devices, has steadily grown, even since 2007 (up nearly 16 percent).



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	South Carolina	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	14,996	1,605,533	III
Bioscience Industry Location Quotient	0.70	n/a	IV
Biosciences Industry Establishments	985	70,006	III

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

South Carolina Highlights:

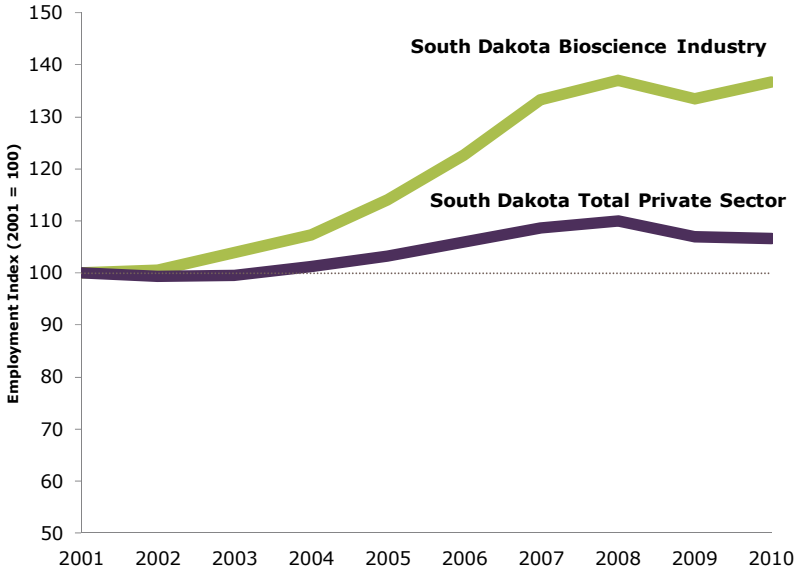
INDUSTRY SUBSECTOR	South Carolina 2010	South Carolina 2001–10 Change	South Carolina 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	24	-2.8%	9.1%	1,760	2.2%	4.5%
Employment	896	192.6%	-14.2%	72,988	-5.9%	-5.5%
Location Quotient	0.92			n/a		
Direct-Effect Employment Multiplier	4.1			5.6		
Total Employment Impact	3,698			405,197		
Average Annual Wage (constant 2010 dollars)	$55,896	37.4%	-7.1%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	44	63.6%	41.9%	2,908	11.3%	6.5%
Employment	3,108	26.4%	-5.8%	296,759	-3.1%	-7.0%
Location Quotient	0.79			n/a		
Direct-Effect Employment Multiplier	3.3			5.3		
Total Employment Impact	10,332			1,464,492		
Average Annual Wage (constant 2010 dollars)	$53,344	7.5%	-1.1%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	76	34.5%	13.4%	6,957	11.7%	7.7%
Employment	4,236	33.4%	15.6%	343,468	-0.3%	-0.8%
Location Quotient	0.93			n/a		
Direct-Effect Employment Multiplier	2.3			2.9		
Total Employment Impact	9,750			956,767		
Average Annual Wage (constant 2010 dollars)	$48,797	15.4%	7.3%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	354	133.1%	49.1%	22,212	48.9%	20.1%
Employment	3,167	61.6%	-6.5%	451,923	23.8%	6.1%
Location Quotient	0.53			n/a		
Direct-Effect Employment Multiplier	2.3			2.6		
Total Employment Impact	7,342			1,178,741		
Average Annual Wage (constant 2010 dollars)	$60,278	7.1%	-2.2%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	487	-9.7%	-33.5%	36,170	-1.1%	-0.3%
Employment	3,589	47.3%	-13.0%	440,394	6.0%	-4.2%
Location Quotient	0.61			n/a		
Direct-Effect Employment Multiplier	2.4			2.4		
Total Employment Impact Multiplier	8,485			1,046,594		
Average Annual Wage (constant 2010 dollars)	$59,847	-2.5%	-16.2%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	985	23.3%	-9.6%	70,006	12.8%	6.7%
Employment	14,996	45.1%	-3.4%	1,605,533	6.4%	-1.4%
Location Quotient	0.70			n/a		
Direct-Effect Employment Multiplier	2.6			3.2		
Total Employment Impact	39,606			5,051,791		
Average Annual Wage (constant 2010 dollars)	$55,233	8.0%	-5.9%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	106,781	-4.6%	-5.7%	8,752,494	12.5%	0.1%
Employment	1,423,071	-3.6%	-9.0%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$36,789	3.8%	0.7%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

South Dakota • South Dakota has a diverse and emerging presence in the biosciences with three of its five major subsectors having a specialized employment concentration in 2010. Its specializations include agricultural feedstock and chemicals; medical devices and equipment; and bioscience-related distribution. Four of its five subsectors have experienced steady growth in recent years leading to an overall bioscience job growth rate of nearly 37 percent since 2001.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	South Dakota	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	4,976	1,605,533	V
Bioscience Industry Location Quotient	1.05	n/a	II
Biosciences Industry Establishments	325	70,006	IV

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

South Dakota Highlights:

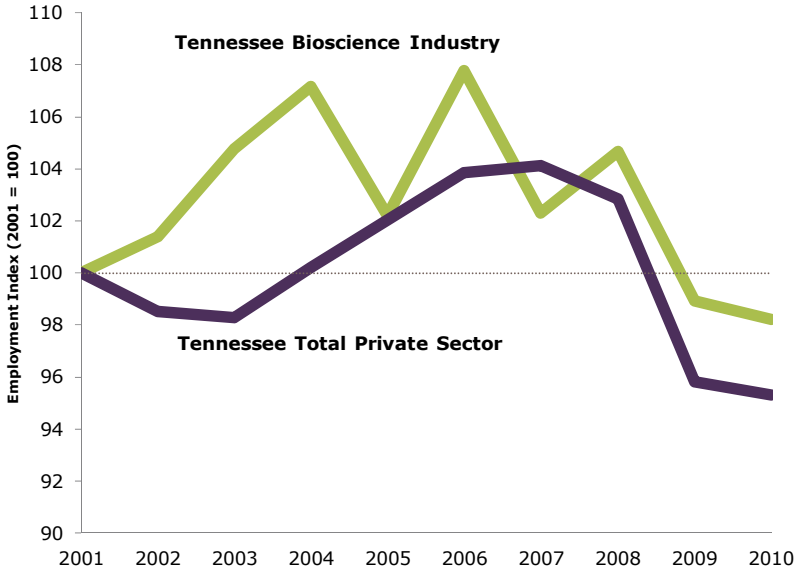
INDUSTRY SUBSECTOR	South Dakota 2010	South Dakota 2001–10 Change	South Dakota 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	27	135.0%	3.8%	1,760	2.2%	4.5%
Employment	760	366.9%	1.7%	72,988	-5.9%	-5.5%
Location Quotient	3.51			n/a		
Direct-Effect Employment Multiplier	2.9			5.6		
Total Employment Impact	2,236			405,197		
Average Annual Wage (constant 2010 dollars)	$58,347	27.8%	-35.0%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	1	-66.7%	-56.5%	2,908	11.3%	6.5%
Employment	14	-77.2%	-91.8%	296,759	-3.1%	-7.0%
Location Quotient	0.02			n/a		
Direct-Effect Employment Multiplier	2.0			5.3		
Total Employment Impact	28			1,464,492		
Average Annual Wage (constant 2010 dollars)	$30,627	-30.6%	-43.0%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	13	32.3%	0.0%	6,957	11.7%	7.7%
Employment	1,726	13.1%	3.4%	343,468	-0.3%	-0.8%
Location Quotient	1.70			n/a		
Direct-Effect Employment Multiplier	1.8			2.9		
Total Employment Impact	3,127			956,767		
Average Annual Wage (constant 2010 dollars)	$53,975	6.4%	1.8%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	45	107.4%	16.9%	22,212	48.9%	20.1%
Employment	380	66.3%	4.4%	451,923	23.8%	6.1%
Location Quotient	0.28			n/a		
Direct-Effect Employment Multiplier	1.7			2.6		
Total Employment Impact	636			1,178,741		
Average Annual Wage (constant 2010 dollars)	$87,252	-0.6%	1.2%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	239	-5.7%	2.9%	36,170	-1.1%	-0.3%
Employment	2,096	26.0%	10.4%	440,394	6.0%	-4.2%
Location Quotient	1.61			n/a		
Direct-Effect Employment Multiplier	1.7			2.4		
Total Employment Impact Multiplier	3,562			1,046,594		
Average Annual Wage (constant 2010 dollars)	$54,181	11.8%	0.9%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	325	8.5%	4.1%	70,006	12.8%	6.7%
Employment	4,976	36.6%	2.6%	1,605,533	6.4%	-1.4%
Location Quotient	1.05			n/a		
Direct-Effect Employment Multiplier	1.9			3.2		
Total Employment Impact	9,589			5,051,791		
Average Annual Wage (constant 2010 dollars)	$57,208	10.7%	-6.9%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	28,419	12.6%	2.2%	8,752,494	12.5%	0.1%
Employment	316,735	6.6%	-1.8%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$33,887	9.5%	3.0%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

TENNESSEE • Tennessee's bioscience industry is sizable and highly concentrated with just over 38,000 jobs and a location quotient of 1.18 in 2010. The state has a specialized employment base in two subsectors—agricultural feedstock and chemicals and bioscience-related distribution. A third subsector, medical devices, is right on the cusp of the specialized threshold used in this report. The devices subsector has experienced strong job growth over the decade, emerging with a 34 percent job gain overall and the state has continued this rapid pace in more recent years.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Tennessee	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	38,025	1,605,533	II
Bioscience Industry Location Quotient	1.18	n/a	II
Biosciences Industry Establishments	1,228	70,006	II

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Tennessee Highlights:

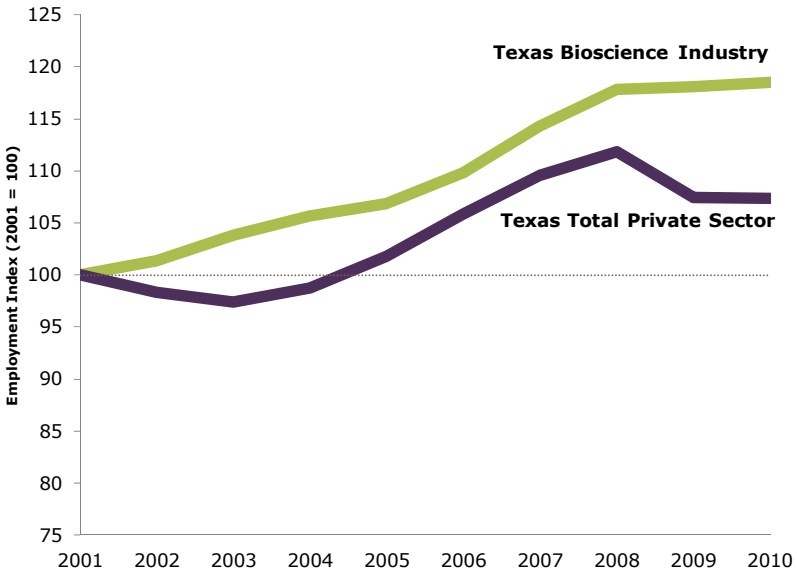
INDUSTRY SUBSECTOR	Tennessee 2010	Tennessee 2001–10 Change	Tennessee 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	33	-12.0%	-5.7%	1,760	2.2%	4.5%
Employment	3,102	-57.1%	-44.5%	72,988	-5.9%	-5.5%
Location Quotient	2.12			n/a		
Direct-Effect Employment Multiplier	5.0			5.6		
Total Employment Impact	15,458			405,197		
Average Annual Wage (constant 2010 dollars)	$94,588	22.1%	2.1%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	33	57.1%	26.9%	2,908	11.3%	6.5%
Employment	3,052	-2.1%	27.4%	296,759	-3.1%	-7.0%
Location Quotient	0.51			n/a		
Direct-Effect Employment Multiplier	3.8			5.3		
Total Employment Impact	11,651			1,464,492		
Average Annual Wage (constant 2010 dollars)	$89,463	47.7%	1.7%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	102	-8.1%	-3.8%	6,957	11.7%	7.7%
Employment	8,151	33.7%	29.2%	343,468	-0.3%	-0.8%
Location Quotient	1.19			n/a		
Direct-Effect Employment Multiplier	3.0			2.9		
Total Employment Impact	24,467			956,767		
Average Annual Wage (constant 2010 dollars)	$71,944	42.7%	7.5%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	276	29.3%	-3.3%	22,212	48.9%	20.1%
Employment	8,254	16.6%	10.8%	451,923	23.8%	6.1%
Location Quotient	0.91			n/a		
Direct-Effect Employment Multiplier	2.5			2.6		
Total Employment Impact	20,473			1,178,741		
Average Annual Wage (constant 2010 dollars)	$73,192	14.4%	4.1%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	784	12.9%	4.8%	36,170	-1.1%	-0.3%
Employment	15,467	1.8%	-13.4%	440,394	6.0%	-4.2%
Location Quotient	1.76			n/a		
Direct-Effect Employment Multiplier	2.4			2.4		
Total Employment Impact Multiplier	36,888			1,046,594		
Average Annual Wage (constant 2010 dollars)	$72,446	12.8%	-1.7%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	1,228	14.0%	2.3%	70,006	12.8%	6.7%
Employment	38,025	-1.8%	-4.0%	1,605,533	6.4%	-1.4%
Location Quotient	1.18			n/a		
Direct-Effect Employment Multiplier	2.9			3.2		
Total Employment Impact	108,937			5,051,791		
Average Annual Wage (constant 2010 dollars)	$75,673	17.9%	0.2%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	135,620	11.0%	-1.3%	8,752,494	12.5%	0.1%
Employment	2,138,027	-4.7%	-8.5%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$41,759	7.9%	1.4%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

TEXAS • Texas has a large and growing bioscience industry. State bioscience employment reached more than 78,000 jobs in 2010 after rapid growth of nearly 19 percent over the decade. Texas firms have continued to add jobs in the sector even since 2007 which includes the difficult labor market conditions with the onset of the recession. Since 2001, four of its five major subsectors have grown and outpaced the national rate in job gains, these include: research, testing, and medical labs (up 49 percent since 2001); bioscience-related distribution (up 27 percent); agricultural feedstock and chemicals (up 19 percent); and drugs and pharmaceuticals (up 7 percent**).**



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Texas	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	78,452	1,605,533	I
Bioscience Industry Location Quotient	0.62	n/a	IV
Biosciences Industry Establishments	4,459	70,006	I

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Texas Highlights:

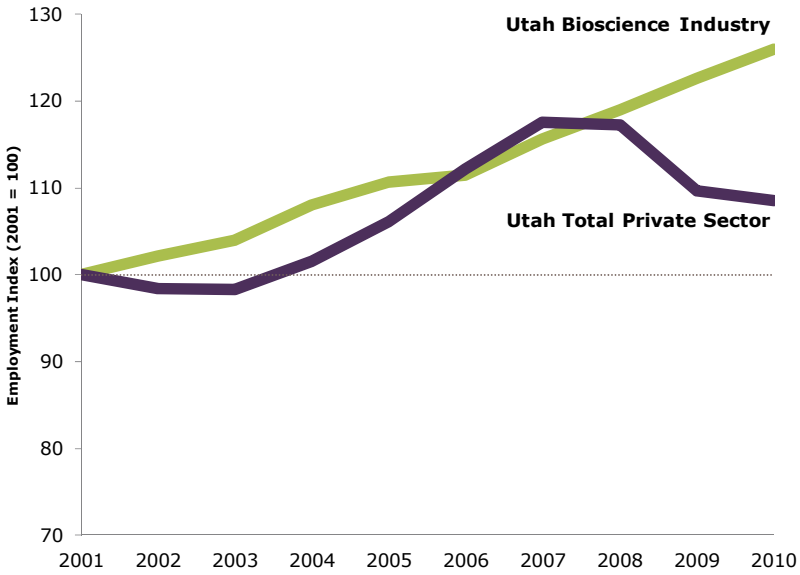
INDUSTRY SUBSECTOR	Texas			United States		
	2010	2001–10 Change	2007–10 Change	2010	2001–10 Change	2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	155	10.4%	7.6%	1,760	2.2%	4.5%
Employment	4,946	18.8%	2.9%	72,988	-5.9%	-5.5%
Location Quotient	0.87			n/a		
Direct-Effect Employment Multiplier	6.3			5.6		
Total Employment Impact	31,009			405,197		
Average Annual Wage (constant 2010 dollars)	$83,360	32.8%	5.8%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	154	14.9%	6.2%	2,908	11.3%	6.5%
Employment	9,596	7.1%	-3.1%	296,759	-3.1%	-7.0%
Location Quotient	0.41			n/a		
Direct-Effect Employment Multiplier	5.1			5.3		
Total Employment Impact	48,932			1,464,492		
Average Annual Wage (constant 2010 dollars)	$110,338	59.2%	10.5%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	378	23.1%	11.8%	6,957	11.7%	7.7%
Employment	10,114	-23.4%	-1.4%	343,468	-0.3%	-0.8%
Location Quotient	0.38			n/a		
Direct-Effect Employment Multiplier	2.9			2.9		
Total Employment Impact	28,871			956,767		
Average Annual Wage (constant 2010 dollars)	$63,070	15.3%	-0.5%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	1,235	83.2%	28.2%	22,212	48.9%	20.1%
Employment	21,236	48.6%	8.7%	451,923	23.8%	6.1%
Location Quotient	0.60			n/a		
Direct-Effect Employment Multiplier	2.6			2.6		
Total Employment Impact	54,579			1,178,741		
Average Annual Wage (constant 2010 dollars)	$71,446	1.2%	0.7%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	2,537	17.4%	5.8%	36,170	-1.1%	-0.3%
Employment	32,560	27.3%	4.6%	440,394	6.0%	-4.2%
Location Quotient	0.95			n/a		
Direct-Effect Employment Multiplier	2.7			2.4		
Total Employment Impact Multiplier	89,243			1,046,594		
Average Annual Wage (constant 2010 dollars)	$81,751	15.1%	0.7%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	4,459	30.5%	11.8%	70,006	12.8%	6.7%
Employment	78,452	18.5%	3.7%	1,605,533	6.4%	-1.4%
Location Quotient	0.63			n/a		
Direct-Effect Employment Multiplier	3.2			3.2		
Total Employment Impact	252,634			5,051,791		
Average Annual Wage (constant 2010 dollars)	$80,151	19.7%	2.2%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	555,759	15.9%	1.5%	8,752,494	12.5%	0.1%
Employment	8,360,874	7.3%	-2.0%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$47,615	5.1%	-0.5%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

UTAH • Utah's bioscience industry is sizable, highly specialized, and rapidly growing. Since 2001, the industry has grown its industry employment base by 26 percent, reaching more than 23,000 jobs in 2010. Job growth over the decade has come from each of the five major subsectors and four of those five have continued overall growth since 2007, the period that includes the deep national recession. The state industry is diverse with three major subsectors have a specialized employment concentration—medical devices; drugs and pharmaceuticals; and research, testing, and medical labs.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Utah	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	23,406	1,605,533	III
Bioscience Industry Location Quotient	1.65	n/a	I
Biosciences Industry Establishments	911	70,006	III

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Utah Highlights:

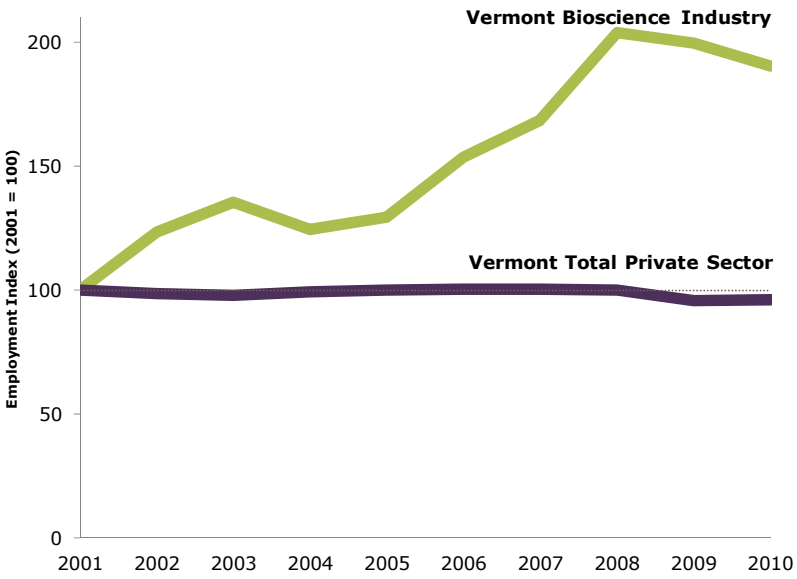
INDUSTRY SUBSECTOR	Utah			United States		
	2010	2001–10 Change	2007–10 Change	2010	2001–10 Change	2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	14	44.8%	16.7%	1,760	2.2%	4.5%
Employment	231	51.2%	-6.5%	72,988	-5.9%	-5.5%
Location Quotient	0.36			n/a		
Direct-Effect Employment Multiplier	5.1			5.6		
Total Employment Impact	1,178			405,197		
Average Annual Wage (constant 2010 dollars)	$62,529	17.7%	17.3%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	79	43.6%	8.2%	2,908	11.3%	6.5%
Employment	4,702	22.9%	3.0%	296,759	-3.1%	-7.0%
Location Quotient	1.79			n/a		
Direct-Effect Employment Multiplier	4.6			5.3		
Total Employment Impact	21,714			1,464,492		
Average Annual Wage (constant 2010 dollars)	$55,694	23.7%	12.1%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	95	20.6%	5.6%	6,957	11.7%	7.7%
Employment	8,741	5.5%	5.4%	343,468	-0.3%	-0.8%
Location Quotient	2.88			n/a		
Direct-Effect Employment Multiplier	2.9			2.9		
Total Employment Impact	24,971			956,767		
Average Annual Wage (constant 2010 dollars)	$55,744	16.8%	-1.4%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	210	32.4%	17.9%	22,212	48.9%	20.1%
Employment	5,857	60.7%	25.1%	451,923	23.8%	6.1%
Location Quotient	1.46			n/a		
Direct-Effect Employment Multiplier	2.6			2.6		
Total Employment Impact	15,171			1,178,741		
Average Annual Wage (constant 2010 dollars)	$57,142	0.6%	-4.0%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	512	101.8%	16.2%	36,170	-1.1%	-0.3%
Employment	3,876	45.2%	5.0%	440,394	6.0%	-4.2%
Location Quotient	0.99			n/a		
Direct-Effect Employment Multiplier	2.6			2.4		
Total Employment Impact Multiplier	9,894			1,046,594		
Average Annual Wage (constant 2010 dollars)	$74,842	25.3%	8.7%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	911	63.7%	14.7%	70,006	12.8%	6.7%
Employment	23,406	26.0%	9.0%	1,605,533	6.4%	-1.4%
Location Quotient	1.65			n/a		
Direct-Effect Employment Multiplier	3.1			3.2		
Total Employment Impact	72,929			5,051,791		
Average Annual Wage (constant 2010 dollars)	$59,313	16.9%	2.6%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	79,690	21.9%	-4.0%	8,752,494	12.5%	0.1%
Employment	946,118	8.5%	-7.6%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$38,932	6.5%	1.0%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

VERMONT • Vermont's bioscience industry employs nearly 2,000 across 212 business establishments. More than half of its employment is in the medical device and equipment subsector which has a specialized employment concentration with a location quotient of 1.40 in 2010. Bioscience-related distribution employs more than 600 and has added jobs in recent years. Over the decade, the biosciences industry has grown jobs in Vermont, increasing by 90 percent since 2001.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Vermont	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	1,957	1,605,533	V
Bioscience Industry Location Quotient	0.54	n/a	IV
Biosciences Industry Establishments	212	70,006	V

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Vermont Highlights:

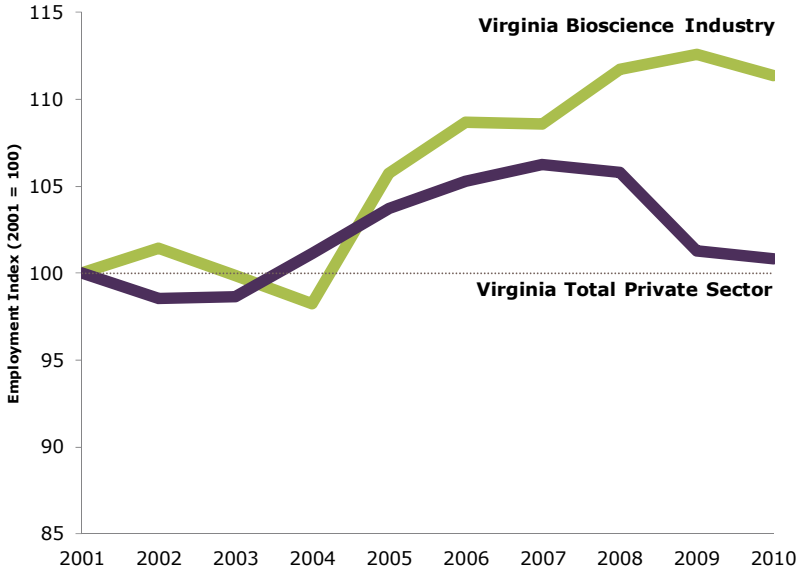
INDUSTRY SUBSECTOR	Vermont			United States		
	2010	2001–10 Change	2007–10 Change	2010	2001–10 Change	2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	5	66.7%	0.0%	1,760	2.2%	4.5%
Employment	8	-60.9%	-66.5%	72,988	-5.9%	-5.5%
Location Quotient	0.05			n/a		
Direct-Effect Employment Multiplier	2.3			5.6		
Total Employment Impact	18			405,197		
Average Annual Wage (constant 2010 dollars)	$37,050	42.9%	26.5%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	6	105.7%	20.0%	2,908	11.3%	6.5%
Employment	67	130.3%	55.8%	296,759	-3.1%	-7.0%
Location Quotient	0.10			n/a		
Direct-Effect Employment Multiplier	2.6			5.3		
Total Employment Impact	171			1,464,492		
Average Annual Wage (constant 2010 dollars)	$72,567	14.7%	23.4%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	20	4.2%	-9.1%	6,957	11.7%	7.7%
Employment	1,081	189.2%	21.8%	343,468	-0.3%	-0.8%
Location Quotient	1.40			n/a		
Direct-Effect Employment Multiplier	2.0			2.9		
Total Employment Impact	2,209			956,767		
Average Annual Wage (constant 2010 dollars)	$58,941	14.5%	5.6%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	40	66.3%	5.1%	22,212	48.9%	20.1%
Employment	139	23.8%	-9.6%	451,923	23.8%	6.1%
Location Quotient	0.14			n/a		
Direct-Effect Employment Multiplier	1.9			2.6		
Total Employment Impact	265			1,178,741		
Average Annual Wage (constant 2010 dollars)	$67,626	61.8%	16.1%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	141	50.4%	3.9%	36,170	-1.1%	-0.3%
Employment	662	34.9%	6.5%	440,394	6.0%	-4.2%
Location Quotient	0.67			n/a		
Direct-Effect Employment Multiplier	2.0			2.4		
Total Employment Impact Multiplier	1,300			1,046,594		
Average Annual Wage (constant 2010 dollars)	$74,410	0.7%	-12.6%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	212	48.3%	3.0%	70,006	12.8%	6.7%
Employment	1,957	90.7%	13.2%	1,605,533	6.4%	-1.4%
Location Quotient	0.54			n/a		
Direct-Effect Employment Multiplier	2.0			3.2		
Total Employment Impact	3,962			5,051,791		
Average Annual Wage (constant 2010 dollars)	$65,173	6.9%	-1.7%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	22,635	0.5%	-2.8%	8,752,494	12.5%	0.1%
Employment	240,159	-3.9%	-4.4%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$49,137	4.9%	1.1%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

VIRGINIA • The bioscience industry in Virginia has experienced strong overall growth, increasing its job base by 11 percent since 2001 and totaling more than 26,000 by 2010. Late in this period, the state continued its bioscience job growth despite the deep recession and job losses in its private sector. Virginia's largest major subsector, research, testing, and medical labs, is emerging, growing jobs at a 61 percent rate since 2001.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Virginia	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	26,127	1,605,533	II
Bioscience Industry Location Quotient	0.61	n/a	IV
Biosciences Industry Establishments	1,321	70,006	II

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Virginia Highlights:

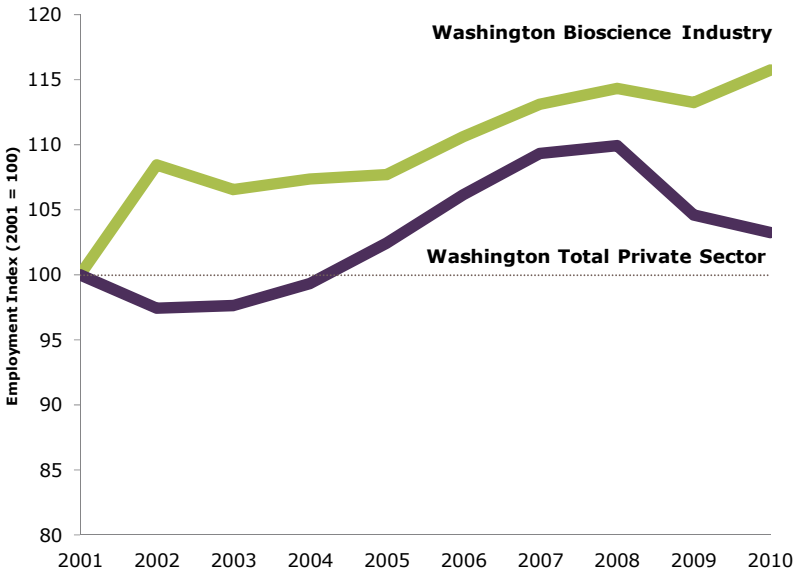
INDUSTRY SUBSECTOR	Virginia 2010	Virginia 2001–10 Change	Virginia 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	22	-12.4%	-4.3%	1,760	2.2%	4.5%
Employment	1,791	-28.1%	19.9%	72,988	-5.9%	-5.5%
Location Quotient	0.92			n/a		
Direct-Effect Employment Multiplier	4.1			5.6		
Total Employment Impact	7,287			405,197		
Average Annual Wage (constant 2010 dollars)	$84,797	24.2%	4.3%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	38	46.2%	31.0%	2,908	11.3%	6.5%
Employment	3,416	-7.7%	-5.1%	296,759	-3.1%	-7.0%
Location Quotient	0.43			n/a		
Direct-Effect Employment Multiplier	4.5			5.3		
Total Employment Impact	15,520			1,464,492		
Average Annual Wage (constant 2010 dollars)	$80,793	8.7%	-11.9%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	118	72.4%	57.3%	6,957	11.7%	7.7%
Employment	1,986	-21.3%	9.9%	343,468	-0.3%	-0.8%
Location Quotient	0.22			n/a		
Direct-Effect Employment Multiplier	2.0			2.9		
Total Employment Impact	4,014			956,767		
Average Annual Wage (constant 2010 dollars)	$55,711	23.2%	3.5%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	514	56.3%	14.7%	22,212	48.9%	20.1%
Employment	11,792	60.7%	8.8%	451,923	23.8%	6.1%
Location Quotient	0.98			n/a		
Direct-Effect Employment Multiplier	2.7			2.6		
Total Employment Impact	31,387			1,178,741		
Average Annual Wage (constant 2010 dollars)	$78,504	16.2%	3.8%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	629	-18.2%	-3.6%	36,170	-1.1%	-0.3%
Employment	7,143	-3.6%	-7.5%	440,394	6.0%	-4.2%
Location Quotient	0.61			n/a		
Direct-Effect Employment Multiplier	2.4			2.4		
Total Employment Impact Multiplier	17,100			1,046,594		
Average Annual Wage (constant 2010 dollars)	$67,812	-1.7%	-2.7%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	1,321	8.5%	7.6%	70,006	12.8%	6.7%
Employment	26,127	11.4%	2.6%	1,605,533	6.4%	-1.4%
Location Quotient	0.61			n/a		
Direct-Effect Employment Multiplier	2.9			3.2		
Total Employment Impact	75,309			5,051,791		
Average Annual Wage (constant 2010 dollars)	$74,579	11.8%	-0.4%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	223,124	17.5%	1.4%	8,752,494	12.5%	0.1%
Employment	2,850,159	0.8%	-5.1%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$38,644	9.3%	2.7%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

WASHINGTON • Washington is growing its bioscience industry, which now employs more than 30,000. Since 2001, the state industry has experienced 16 percent job growth, outpacing growth in the national sector. Late in this period, Washington bioscience firms were able to largely maintain this upward trajectory despite the national recession. The state has a specialized employment concentration in research, testing, and medical labs with a location quotient of 1.36 and strong job growth over the decade (up 56 percent).



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Washington	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	30,127	1,605,533	II
Bioscience Industry Location Quotient	0.88	n/a	II
Biosciences Industry Establishments	1,317	70,006	II

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Washington Highlights:

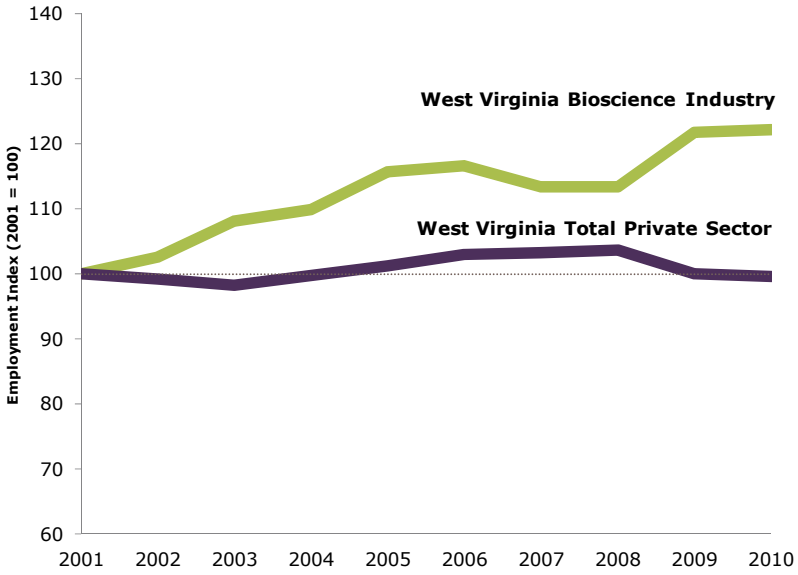
INDUSTRY SUBSECTOR	Washington 2010	Washington 2001–10 Change	Washington 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	33	-7.1%	11.0%	1,760	2.2%	4.5%
Employment	622	-8.9%	17.4%	72,988	-5.9%	-5.5%
Location Quotient	0.40			n/a		
Direct-Effect Employment Multiplier	4.8			5.6		
Total Employment Impact	2,971			405,197		
Average Annual Wage (constant 2010 dollars)	$51,016	-7.7%	-6.2%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	53	-7.0%	1.9%	2,908	11.3%	6.5%
Employment	2,085	-10.0%	-18.2%	296,759	-3.1%	-7.0%
Location Quotient	0.33			n/a		
Direct-Effect Employment Multiplier	4.1			5.3		
Total Employment Impact	8,468			1,464,492		
Average Annual Wage (constant 2010 dollars)	$52,512	-52.5%	-33.6%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	132	15.6%	-6.4%	6,957	11.7%	7.7%
Employment	5,902	2.8%	0.0%	343,468	-0.3%	-0.8%
Location Quotient	0.80			n/a		
Direct-Effect Employment Multiplier	3.2			2.9		
Total Employment Impact	18,849			956,767		
Average Annual Wage (constant 2010 dollars)	$77,349	5.0%	-0.7%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	452	37.8%	10.7%	22,212	48.9%	20.1%
Employment	13,130	56.0%	17.9%	451,923	23.8%	6.1%
Location Quotient	1.36			n/a		
Direct-Effect Employment Multiplier	2.5			2.6		
Total Employment Impact	33,403			1,178,741		
Average Annual Wage (constant 2010 dollars)	$82,492	25.0%	1.7%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	646	-39.3%	-9.6%	36,170	-1.1%	-0.3%
Employment	8,388	-5.4%	-10.1%	440,394	6.0%	-4.2%
Location Quotient	0.89			n/a		
Direct-Effect Employment Multiplier	2.3			2.4		
Total Employment Impact Multiplier	19,497			1,046,594		
Average Annual Wage (constant 2010 dollars)	$77,792	5.8%	1.0%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	1,317	-17.7%	-2.2%	70,006	12.8%	6.7%
Employment	30,127	15.8%	2.3%	1,605,533	6.4%	-1.4%
Location Quotient	0.88			n/a		
Direct-Effect Employment Multiplier	2.8			3.2		
Total Employment Impact	83,188			5,051,791		
Average Annual Wage (constant 2010 dollars)	$77,452	4.8%	-1.3%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	227,817	5.3%	6.9%	8,752,494	12.5%	0.1%
Employment	2,283,181	3.3%	-5.5%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$47,860	3.9%	2.0%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

WEST VIRGINIA • West Virginia employs more than 6,400 in its bioscience industry in 2010 after a decade in which it grew by 22 percent. Four in ten state bioscience jobs are in drugs and pharmaceuticals, which has a specialized employment concentration in West Virginia with a location quotient of 1.72. Drugs manufacturing has grown its job base by 28 percent since 2001 and continued these gains in more recent years despite job declines at the national level.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	West Virginia	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	6,439	1,605,533	IV
Bioscience Industry Location Quotient	0.78	n/a	III
Biosciences Industry Establishments	302	70,006	V

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

West Virginia Highlights:

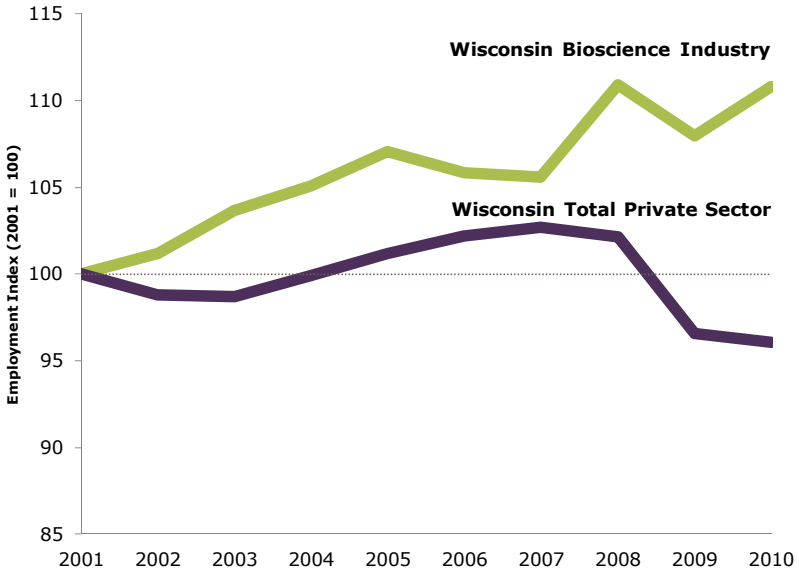
INDUSTRY SUBSECTOR	West Virginia 2010	West Virginia 2001–10 Change	West Virginia 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	5	-6.8%	-28.6%	1,760	2.2%	4.5%
Employment	166	339.3%	-80.0%	72,988	-5.9%	-5.5%
Location Quotient	0.44			n/a		
Direct-Effect Employment Multiplier	2.8			5.6		
Total Employment Impact	469			405,197		
Average Annual Wage (constant 2010 dollars)	$54,742	21.8%	-3.3%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	7	-14.4%	75.0%	2,908	11.3%	6.5%
Employment	2,628	48.4%	57.8%	296,759	-3.1%	-7.0%
Location Quotient	1.72			n/a		
Direct-Effect Employment Multiplier	3.2			5.3		
Total Employment Impact	8,297			1,464,492		
Average Annual Wage (constant 2010 dollars)	$77,685	-1.6%	-0.4%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	9	-26.9%	-25.0%	6,957	11.7%	7.7%
Employment	820	56.0%	34.6%	343,468	-0.3%	-0.8%
Location Quotient	0.46			n/a		
Direct-Effect Employment Multiplier	1.8			2.9		
Total Employment Impact	1,503			956,767		
Average Annual Wage (constant 2010 dollars)	$59,289	43.5%	27.0%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	119	149.3%	90.5%	22,212	48.9%	20.1%
Employment	1,336	25.8%	19.6%	451,923	23.8%	6.1%
Location Quotient	0.58			n/a		
Direct-Effect Employment Multiplier	1.8			2.6		
Total Employment Impact	2,436			1,178,741		
Average Annual Wage (constant 2010 dollars)	$49,627	13.3%	2.9%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	162	-30.9%	-12.5%	36,170	-1.1%	-0.3%
Employment	1,489	-20.5%	-15.1%	440,394	6.0%	-4.2%
Location Quotient	0.66			n/a		
Direct-Effect Employment Multiplier	1.9			2.4		
Total Employment Impact Multiplier	2,890			1,046,594		
Average Annual Wage (constant 2010 dollars)	$69,380	4.9%	-3.6%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	302	-1.9%	11.7%	70,006	12.8%	6.7%
Employment	6,439	22.2%	7.8%	1,605,533	6.4%	-1.4%
Location Quotient	0.78			n/a		
Direct-Effect Employment Multiplier	2.4			3.2		
Total Employment Impact	15,596			5,051,791		
Average Annual Wage (constant 2010 dollars)	$67,008	5.8%	3.9%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	44,544	1.3%	-0.7%	8,752,494	12.5%	0.1%
Employment	549,664	-0.4%	-3.5%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$39,531	10.0%	5.6%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

WISCONSIN • Wisconsin's bioscience industry is sizable and growing, with nearly 31,000 jobs in 2010 that span 1,366 business establishments. The state has a specialized employment concentration in medical devices, a sector that has added jobs overall since 2007 and has a location quotient of 1.48. Its second largest subsector, bioscience-related distribution, employs more than 10,000 and is well concentrated in Wisconsin.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Wisconsin	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	30,796	1,605,533	II
Bioscience Industry Location Quotient	0.91	n/a	II
Biosciences Industry Establishments	1,366	70,006	II

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Wisconsin Highlights:

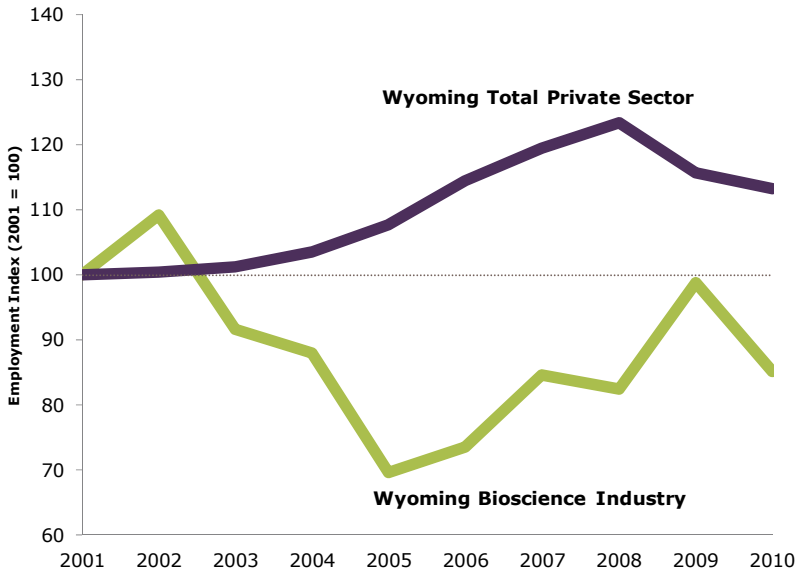
INDUSTRY SUBSECTOR	Wisconsin 2010	Wisconsin 2001–10 Change	Wisconsin 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	45	-14.6%	-21.5%	1,760	2.2%	4.5%
Employment	1,246	29.9%	-4.1%	72,988	-5.9%	-5.5%
Location Quotient	0.81			n/a		
Direct-Effect Employment Multiplier	4.3			5.6		
Total Employment Impact	5,304			405,197		
Average Annual Wage (constant 2010 dollars)	$54,822	27.3%	14.9%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	74	32.1%	13.8%	2,908	11.3%	6.5%
Employment	3,835	47.3%	13.5%	296,759	-3.1%	-7.0%
Location Quotient	0.62			n/a		
Direct-Effect Employment Multiplier	3.9			5.3		
Total Employment Impact	15,079			1,464,492		
Average Annual Wage (constant 2010 dollars)	$63,033	10.9%	-11.2%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	196	42.0%	35.2%	6,957	11.7%	7.7%
Employment	10,675	-2.4%	8.0%	343,468	-0.3%	-0.8%
Location Quotient	1.48			n/a		
Direct-Effect Employment Multiplier	3.6			2.9		
Total Employment Impact	38,766			956,767		
Average Annual Wage (constant 2010 dollars)	$79,409	7.0%	-3.7%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	250	42.4%	15.4%	22,212	48.9%	20.1%
Employment	5,035	41.6%	18.0%	451,923	23.8%	6.1%
Location Quotient	0.53			n/a		
Direct-Effect Employment Multiplier	2.3			2.6		
Total Employment Impact	11,597			1,178,741		
Average Annual Wage (constant 2010 dollars)	$59,145	13.7%	-5.1%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	801	-22.7%	-7.1%	36,170	-1.1%	-0.3%
Employment	10,005	2.7%	-4.9%	440,394	6.0%	-4.2%
Location Quotient	1.08			n/a		
Direct-Effect Employment Multiplier	2.3			2.4		
Total Employment Impact Multiplier	22,995			1,046,594		
Average Annual Wage (constant 2010 dollars)	$67,270	9.8%	0.0%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	1,366	-6.3%	1.5%	70,006	12.8%	6.7%
Employment	30,796	10.8%	5.0%	1,605,533	6.4%	-1.4%
Location Quotient	0.91			n/a		
Direct-Effect Employment Multiplier	3.0			3.2		
Total Employment Impact	93,741			5,051,791		
Average Annual Wage (constant 2010 dollars)	$69,118	7.8%	-3.0%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	149,573	6.0%	-1.5%	8,752,494	12.5%	0.1%
Employment	2,245,774	-3.9%	-6.5%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$36,990	2.9%	-0.3%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).

WYOMING • Wyoming's bioscience industry is modest in size, with more than 800 employed across 124 business establishments. The state has a specialized concentration of jobs in agricultural feedstock and chemicals, with more than 300 jobs and a location quotient of 2.37 in 2010.



Bioscience Employment Tier

Summary of State Performance in Industry Related Metrics

Metrics	Wyoming	United States	Rank*
Bioscience Industry, 2010			
Total Bioscience Industry Employment	831	1,605,533	V
Bioscience Industry Location Quotient	0.27	n/a	V
Biosciences Industry Establishments	124	70,006	V

*State ranking figures for bioscience industry employment metrics are calculated as quintiles (I=Top Quintile; V=Bottom Quintile).

Bioscience Industry Base, 2010

Wyoming Highlights:

INDUSTRY SUBSECTOR	Wyoming 2010	Wyoming 2001–10 Change	Wyoming 2007–10 Change	United States 2010	United States 2001–10 Change	United States 2007–10 Change
AGRICULTURAL FEEDSTOCK & CHEMICALS						
Establishments	5	10.6%	0.0%	1,760	2.2%	4.5%
Employment	332	-20.0%	6.5%	72,988	-5.9%	-5.5%
Location Quotient	2.37			n/a		
Direct-Effect Employment Multiplier	4.4			5.6		
Total Employment Impact	1453			405,197		
Average Annual Wage (constant 2010 dollars)	$77,479	-3.1%	5.5%	$70,869	8.7%	1.5%
DRUGS & PHARMACEUTICALS						
Establishments	7	-12.5%	16.7%	2,908	11.3%	6.5%
Employment	135	150.0%	64.6%	296,759	-3.1%	-7.0%
Location Quotient	0.24			n/a		
Direct-Effect Employment Multiplier	1.9			5.3		
Total Employment Impact	253			1,464,492		
Average Annual Wage (constant 2010 dollars)	$46,819	-4.3%	-4.8%	$99,486	15.3%	1.1%
MEDICAL DEVICES & EQUIPMENT						
Establishments	5	-3.8%	0.0%	6,957	11.7%	7.7%
Employment	15	190.7%	-48.5%	343,468	-0.3%	-0.8%
Location Quotient	0.02			n/a		
Direct-Effect Employment Multiplier	1.8			2.9		
Total Employment Impact	29			956,767		
Average Annual Wage (constant 2010 dollars)	$81,118	106.3%	92.6%	$72,301	13.9%	1.0%
RESEARCH, TESTING, & MEDICAL LABORATORIES						
Establishments	23	8.6%	4.5%	22,212	48.9%	20.1%
Employment	90	-51.2%	-12.2%	451,923	23.8%	6.1%
Location Quotient	0.10			n/a		
Direct-Effect Employment Multiplier	1.6			2.6		
Total Employment Impact	142			1,178,741		
Average Annual Wage (constant 2010 dollars)	$48,735	28.6%	7.0%	$84,065	12.3%	1.5%
BIOSCIENCE-RELATED DISTRIBUTION						
Establishments	84	4.8%	5.6%	36,170	-1.1%	-0.3%
Employment	258	-18.3%	-13.7%	440,394	6.0%	-4.2%
Location Quotient	0.31			n/a		
Direct-Effect Employment Multiplier	1.8			2.4		
Total Employment Impact Multiplier	453			1,046,594		
Average Annual Wage (constant 2010 dollars)	$94,476	105.3%	68.8%	$80,049	12.2%	-0.4%
TOTAL BIOSCIENCE INDUSTRY						
Establishments	124	4.1%	5.5%	70,006	12.8%	6.7%
Employment	831	-14.8%	0.6%	1,605,533	6.4%	-1.4%
Location Quotient	0.27			n/a		
Direct-Effect Employment Multiplier	2.8			3.2		
Total Employment Impact	2,329			5,051,791		
Average Annual Wage (constant 2010 dollars)	$74,718	26.5%	24.4%	$82,697	13.1%	0.6%
TOTAL PRIVATE SECTOR						
Establishments	23,469	17.7%	2.4%	8,752,494	12.5%	0.1%
Employment	205,188	13.2%	-5.3%	106,863,403	-2.9%	-6.9%
Average Annual Wage (constant 2010 dollars)	$41,261	21.4%	1.1%	$46,317	4.4%	-0.4%

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

Employment, Establishment, and Wage Data: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW); enhanced file from IMPLAN.

Employment Multipliers: U.S. Bureau of Economic Analysis RIMS II Employment Multipliers, 2008 (most current available).