

outpacing the nation in bioscience industries

Iowa is capitalizing on its success in agriculture and its research capabilities in plant, animal and human biosciences to build a thriving biosciences industry in the state. From start-up companies to globally-respected industry leaders in research and development, Iowa's bioscience enterprises are discovering the innovations that will spur future economic growth.

In the last decade, Iowa has made significant progress in growing the industry, with employment surging 26 percent between 2001 and 2008, outpacing growth of 15.8 percent at the national level according to a March 2011 report by the Battelle Technology Partnership Practice.

A critical mass of bioscience companies and research institutions in Iowa are pushing industry growth in the state. Today, roughly 1,250 entities are working to commercialize Iowa's bioscience innovations. Iowa's biosciences industry has proven to be resilient. Even as the economy began to slip into recession, Iowa's bioscience sector grew its employment by 4.5 percent between 2007 and 2008. (Battelle, 2011)

companies already at work in Iowa

Iowa's winning bioscience business climate

State government, private industry and world-class research help bioscience firms compete globally and turn breakthrough research discoveries into start-up businesses through use of innovative strategies. Bioscience companies particularly benefit from Iowa's abundant access to raw materials and strong transportation infrastructure.

Additionally, companies operating in Iowa benefit from a business-friendly state government, business-minded tax incentives and a skilled and productive workforce within a right-to-work state. With one of the lowest costs of doing business in the country (CNBC, 2015), Iowa remains an attractive location for both new and existing bioscience firms. The state has made a significant contribution in growing the industry, investing \$81 million in direct financial assistance to over 200 bioscience projects in the state in the past 10 years. Those projects have created or retained over 10,000 jobs and made \$11.4 billion in total capital investment in Iowa.

Iowa's universities are leaders in bioscience research and development

Iowa is home to three public universities – the University of Iowa, Iowa State University and the University of Northern Iowa – that are world-renowned for their dynamic research capabilities in plant, animal and human biosciences. The universities leverage over \$600 million in cumulative grants, contracts and cooperative research on an annual basis.



Exciting human and animal research advancements are being made at university research facilities across the state including:

- The University of Iowa Carver College of Medicine is comprised of 11 buildings that total approximately 1.4 million gross square feet (921,000 net square feet) of usable space, which is devoted to research, education, and administrative and event activities. Researchers in the college's over 280 laboratories are served by state-of-the-art core research and research support facilities. The college's research enterprise has garnered over \$203.6 million in external funding and is ranked 11th among public institutions by U.S. News & World Report.
- The University of Iowa Pharmaceuticals (UIP) is a Food and Drug Administration-registered pharmaceutical manufacturing facility. UIP provides contract pharmaceutical services including pre-formulation studies, formulation development (including lyophilization cycle development), clinical supply, manufacturing, small scale commercial manufacturing, analytical method development and validation, routine quality control analysis, stability studies, and active pharmaceutical ingredient and excipient release testing to clients from around the world.
- Iowa State University's College of Veterinary Medicine researchers develop vaccines to control and eradicate animal diseases, provides a state-of-the-art teaching hospital, delivers pre-eminent, comprehensive programs in swine, dairy, beef and small ruminant production animal medicine and animal welfare. The college also conducts veterinary services that aim to protect animal and human health by providing effective diagnostic testing to tens of thousands of clients each year. The college is a cornerstone of one of the world's largest concentrations of animal health professionals that includes the USDA's National Animal Disease Center, the National Veterinary Services Laboratories and the Center for Veterinary Biologics in Ames, Iowa.

more proof Iowa is the place for business

- Iowa's pro-business government works to help bioscience businesses grow through a variety of programs that offer direct financial assistance, tax credit programs including a refundable, R&D tax credit program and bioscience job training funds.
- Iowa's skilled, well-educated and adaptable workforce provides higher-quality output and lower operational costs. Iowa has funded over \$260 million dollars in job training since 2006.
- In 2015, Iowa exported \$268 million in pharmaceutical products to 55 countries. The top export markets were Germany (\$49.5 million), Netherlands (\$44.3 million), Mexico (\$29.5 million), Canada (\$26.6 million) and Japan (\$18.3 million). (GTIS, 2013)
- In 2012, Iowa's bioscience industry employed 23,729 across 1,250 individual business establishments. (Battelle, 2012)
- Iowa had the fifth highest location quotient for veterinarians with 50 percent more than the national average. (Bureau of Labor Statistics, 2014)
- Iowa has the fifth highest concentration of food scientists in the country, 130 percent more than the national average. (Bureau of Labor Statistics, 2014)
- Iowa has the 14th highest concentration of biological technicians in the country, with 30 percent more than the national average. (Bureau of Labor Statistics, 2014)
- Iowa ranks 2nd in the country for the number of Science and Engineering bachelors degrees conferred per 1,000 people ages 18-24. (National Science Foundation, 2011)