

Iowa Biotech Pros Create A Better World, One Lab At A Time



A revolution in Iowa is gaining momentum that will change our world as nothing has since the microchip. Instead of information bytes, this revolution will be written in genetic code. Iowa stands at the epicenter of change in life sciences and biotechnology, **offering a golden opportunity for those who want to be pioneers in reshaping pharmaceutical, nutraceutical and agricultural products for a world in need.** Iowa is a leading force in the burgeoning business of biotechnology, the first great innovative wave of the 21st century.

The abundance of raw material and access to some of the nation's top academic and scientific talent make Iowa a good choice for new biotechnology firms and those seeking to advance their careers in biotech. Somewhere today in Iowa, discovery is taking place in the life sciences that will bring greater health and more comfort to humanity worldwide. Thousands of Iowa scientists, engineers and technical personnel are at work improving human, environmental and economic well-being through research and development in life sciences. As the revolution expands, thousands more will be needed to fill positions for disciplines and skills yet unknown. Not since the explosion of the computer industry has there been a better moment for young, talented people in the first days of their professional career to advance quickly in high-paying positions.

The roots of biotechnology lie deep in Iowa's tradition of global agricultural leadership, world-renowned centers of learning and research, cutting-edge information delivery

systems, an infrastructure built to serve the entire life sciences community, and the nation's most skilled and productive workforce.

Iowa's strong commodity base provides a living laboratory for biotechnology research. Iowa's principal crops, corn and soybeans, are focal points for exciting biotechnology discoveries.

Globally respected names in biotechnology advancements — Cargill; Kemin Industries; Pioneer, A DuPont Company; and Monsanto — share the Iowa landscape with emerging new biotechnology companies such as Integrated DNA Technologies, Trans Ova Genetics, and CombiSep, all which have exciting career opportunities.

With its world-class research universities, highly skilled technical workers, rapidly growing life sciences industry cluster and proactive business climate, Iowa is well positioned to advance the growth of this industry. New initiatives promise to mobilize more venture capital for biotechnology enterprise development. Governor Thomas J. Vilsack — named "Governor of the Year 2001" by the Biotechnology Industry Organization — has signed legislation creating a tax credit for investors who make equity or seed capital fund



Platinum Member Profiles



MidAmerican Energy Company serves more than one million gas and electric customers in four states. The MidAmerican service area — located in the center of an eight-state region — includes more than 1.5 million businesses and 35.5 million people. MidAmerican service professionals help businesses make wise decisions for effective energy management and assist customers in evaluating equipment for optimum efficiency. MidAmerican offers career opportunities in a great variety of disciplines, from engineers and technicians to accounting and service professionals.



Nucleic acid synthesis is the fuel that drives the biotechnology revolution. Since 1987, Integrated DNA Technologies, Inc., of Coralville has been a major force in advancing biotechnology research as both a leading supplier of custom oligonucleotide synthesis and a developer of innovative new biotechnologies. IDT services a significant number of life sciences research activities nationwide and around the globe. The company has just undergone a \$52 million facility renovation. Currently, the company employs more than 330 persons, with that number expected to continue to grow.

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investments. Current proposed legislation also includes a \$50 million life sciences initiative. Governor Vilsack helped create the Governors Biotechnology Partnership, a bipartisan coalition of governors serving as a clearinghouse for biotechnology information.

Iowa's emerging prominence in life sciences is fueled by cutting-edge research at three renowned public universities and by

partnerships with businesses to transfer discoveries to the private sector. Iowa is the number-two state in the United States in the number of university-associated biotechnology research centers.

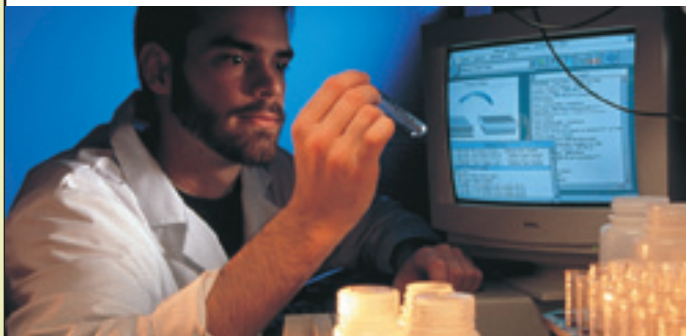
From plant science to industrial polymers to animal science to medicine and pharmaceutical products, Iowa university researchers have gained global recognition for contributions to the life sciences industry. Iowans are proud of the research accomplishments at The University of Iowa, Iowa State University and the University of Northern Iowa. Iowans know the best is yet to come for the state's life sciences industry.

Iowa community colleges are heeding the call for training workers skilled in biotechnology, manufacturing, assembly, research and development, and processing. Whether companies need workers with special technology skills or a solid grasp of basic knowledge, Iowa's network of community colleges is a great resource and partner for the business community.



Iowa is evolving into a global crossroads of mind and material, creating new potential for good from plants and animals through value-added and biological technologies. Join us for the revolution.

For more information and a listing of available jobs in other specialized fields, as well as comprehensive information on living in Iowa, consult the user-friendly interactive Web site: www.smartcareermove.com.



www.smartcareermove.com

International Talent Turns Life Sciences Research Into Global Market Share For Iowa Bioprocessing Center

The world has arrived in Eddyville, Iowa. As headquarters for the mammoth Iowa Bioprocessing Center, a five-company biotechnology cluster, Eddyville is now home to professionals working in new disciplines, who have brought new languages and traditions to this southeastern Iowa town.



“The Iowa Bioprocessing Center is a unique facility,” said Cargill-Eddyville Assistant Vice President and Facility Manager Eric Johnson. “We have attracted German companies and Japanese companies, so sometimes when you go down to Eddyville, you’ll hear all these different languages. This gives sort of an international feel to a very small town.”

Cargill serves as the hub for “over the fence” partnerships with other companies, transforming the byproducts of corn into household products shipped worldwide, from soft drink sweeteners to ethanol, from dry ice to agents used in fabric-softener sheets.

As Johnson points out, these are still only the initial phases of how biotechnology will transform the kinds of products produced by companies such as those at the Iowa Bioprocessing Center.

“Today, we’re talking about fermentation products and making products in large fermentation vessels. In the future, we’ll be talking about making health products, drugs, directly in the plant,” said Johnson. “So this is an exciting world and one that Iowa is uniquely positioned to participate in.”

Corn byproducts will be used in greater, more innovative ways to improve the production of plastics, vitamins, acids, emulsifiers, texturizers, and additives for the food business. Industrial chemicals now extracted from oil will come from corn.

Scientists at Cargill are ready to introduce patented products “new to the world,” according to Jack Staloch, president of Cargill Acidulants in Eddyville. The company is taking products grown in Iowa, adding value to them and shipping them all over the globe. Citric acid is a core product of the bioprocessing facility — an environmentally safe acid used in foods and beverages and shipped to 50 countries from Eddyville’s plant for use in isotonic drinks, flavored teas, sport drinks and candies.

Success will depend on recruiting biological science professionals at all levels, who will help develop the next generation of products created through biotechnology.

As the cluster expands and new processes come on line, Staloch says even more highly trained professionals will be called upon to help develop and market products. To meet that expected demand, the cluster companies worked with state economic development officials and Indian Hills Community College to create the Iowa Bioprocessing Training Center, a new educational facility built nearby. Students will have a two-year curriculum designed to meet the skill needs of bioprocessing operations.

“One of the things we are doing as a company is getting into ever higher value-added products,” said Staloch. “This requires a higher level of expertise and a workforce that can adapt rapidly because you have to bring new products to market quickly. So having that training center right here on site — to service all the companies that are at this bioprocessing facility — I think, is critical to our future.

“We need to have a workforce that adapts and learns quickly. To be able to develop a process, bring it on line quickly and be successful takes a different kind of workforce. It’s not a workforce that says, ‘Tell me what to do and I’ll do it.’ It’s ‘Here’s a process; let’s work together; let’s optimize it; let’s make it a world-beater.’”

From an initial investment of \$100 million and 65 employees in 1985, the facility has grown to employ “well over 1,000 people between the various businesses,” according to Johnson. Total investment to date is over a billion dollars. Companies have built plants next to Cargill and buy corn-based dextrose transported by pipeline. Heartland Lysine buys Cargill dextrose to make lysine, as does Ajinomoto to make monosodium glutamate. In a separate joint venture, Swiss vitamin giant Hoffman-LaRoche is the exclusive consumer for all the natural vitamin E produced at a state-of-the-art Eddyville plant, which opened in 1998. Wacker Biochem began operation in 1998, making cyclodextrins.

“Cargill can’t make all of those products,” added Johnson. “Our vision has become one of ‘Let’s attract partners to grow the business from that raw material.’ Successes beget success. So as we’ve found areas of opportunity, we’ve continued to find new areas for success.”



Iowa Human Resource Recruitment Consortium

The Iowa Human Resource Recruitment Consortium is a partnership of companies, communities and organizations dedicated to promoting Iowa's quality of life and career opportunities. Its members — including the Iowa Department of Economic Development and Iowa Workforce Development — are some of Iowa's leading resources in helping people make the smart career move. Visit www.smartcareermove.com for a sample of the career opportunities available in Iowa, then link to the Web sites of members listed here.

Companies

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It also serves as a gateway to **additional career opportunities** in Iowa. To access the links, click on the "Related Links" button on the home page.

Organizations

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