Finding Future Employees at Iowa State University

Iowa State University is a great place to find bright, energetic, and well trained employees for life science companies. With modern technology it's easy to reach thousands of people with your job openings. The hard part is finding people with the right skills. Each of Iowa State University's colleges has career services offices that can make the job easier through the use of the Internet and individualized services to industries.

**College of Agriculture**
[www.ag.iastate.edu/careerservices/product2.html](http://www.ag.iastate.edu/careerservices/product2.html)

Companies can register for free on the college's career services web site for online access to student resumes through keyword searches. On-campus interview scheduling is also available online, including the ability for companies to pre-select who they want to interview and to review interview schedules. General recruitment meetings can be arranged, giving companies an opportunity to meet one-on-one with interested students. Job openings are posted on the college's web site, sent via e-mail, and via season career services newsletter for students. The office collects resumes for companies with specific job openings. The annual career day, held every October, is scheduled for October 21, 2003, at the ISU Memorial Union. Questions about the college of agriculture's career services should be directed to Mike Gaul, director, 515-294-7275 or mikegaul@iastate.edu.

**College of Business and College of Liberal Arts and Sciences (LAS)**
[www.carers.iastate.edu/employers/default.asp](http://www.carers.iastate.edu/employers/default.asp)

The two colleges work together to provide companies with recruiting services for job and internship openings. A free resume request service is available, where companies provide basic information about the position via an online form, and the career services office collects and sends resumes that fit the job's requirements. Companies can post job and internship openings on the college's web site or request that the career service office collect resumes that fit a job opening. Companies can schedule days for one-on-one interaction between their representatives and students. The two colleges host one of the university's largest career days, held each fall and spring semester. The fall 2003 Business/LAS career day will be held September 24. Questions about the Business/LAS career services should be directed to Steven Kravinsky, director, 515-294-2542 or buslascs@iastate.edu.

**College of Engineering**
[www.eng.iastate.edu/ecs/employers/employers2.html](http://www.eng.iastate.edu/ecs/employers/employers2.html)

The college provides a resume-gathering service for potential employers. Employers provide job information, and the career services office will gather resumes from students and alumni from its database and send to the company those that qualify. Job openings can be submitted via e-mail to ecsjobpostings@iastate.edu, by phone to 515-294-2574, or by fax to 515-294-2540, and are posted on non-public web page for six weeks. Recruitment meetings can be scheduled for an individual company to come to campus to meet pre-selected students. The college hosts an Engineering Week on campus each fall and spring semester, including a career day. The spring career day includes internship and summer job opportunities as well as full-time career opportunities. The fall 2003 career day will be held on September 23. Questions about engineering career services should be directed to ecs@iastate.edu or 515-294-2574.

**College of Family and Consumer Sciences**
[www.fcs.iastate.edu/career/employers/Default.htm](http://www.fcs.iastate.edu/career/employers/Default.htm)

Companies can post job openings on the college's Position Available List (PAL) by filling out an employee vacancy form online, or via e-mail or fax. PAL is posted online and twice per month in paper format, and is available to students and subscribing alumni. The office conducts resume searches for industries with job openings. On-campus interviewing and meetings with students can be arranged with different departments within the college, as listed on the web site. Questions about FCS career services should be directed to fcs@iastate.edu, phone 515-294-7246 or by fax to 515-294-7246.

**College of Veterinary Medicine**
[www.vetmed.iastate.edu/services/Jobsearch/](http://www.vetmed.iastate.edu/services/Jobsearch/)

Industries can post job and internship openings on the web for student and alumni viewing. On-
Biotechnology News

Retreat Focuses on the Precautionary Principle

The need for understanding the precautionary principle brought more than 40 ISU faculty and Extension personnel together in January.

The precautionary principle suggests that events or developments involving uncertain consequences should be examined with the goal of encouraging thoughtful and deliberate consideration of potential consequences before acting on them. The principle has been widely used in environmental and public-health initiatives since its development in the 1980s.

Keynote speaker Carl Cranor, from the University of California, Riverside and Carolyn Raffensperger, Executive Director of the Science and Environmental Health Network, discussed the implementation and potential uses of the precautionary principle. GianCarlo Moschini, ISU professor of economics, discussed the principle in the context of economics.

A panel presentation in the afternoon addressed various perspectives of the implementation of the precautionary principle for planting pharmaceutical crops. Panel members were Doug Getter, executive director of the Iowa Biotechnology Association; Laura Krause, biology teacher at Cornell College and organic farmer; and Kan Wang, ISU professor of agronomy.

Getter discussed the strengths Iowa has for biotechnology development and the Iowa's goals to become a leader in biotechnology industry. Krause talked about her experience as an organic farmer whose business is threatened by the presence of GMOs in her crops. Wang presented information about the history of vaccines and their future in transgenic plants and showed examples of her field and laboratory research with transgenic plants.

“The retreat speakers and participants were dynamic, and I was pleased with the quality of discussion about the ethical considerations of pharmaceutical crops. I hope the participants left the retreat with a better understanding of the precautionary principle and the ethical issues surrounding the development of pharmaceutical crops and other new technologies,” said Kristen Hessler, bioethics outreach coordinator for Iowa State University and coordinator of the retreat.

ISU Provides New Educational Curriculum on Bt Crops

Teachers, extension specialists, and anyone else interested in Bt crops have a new educational resource prepared by Iowa State University's Office of Biotechnology and published by ISU Extension.

The set of curriculum materials is titled Bacillus thuringiensis: Sharing Its Natural Talent With Crops. Genes from the soil bacterium Bacillus thuringiensis (Bt) have been genetically engineered into crops to provide insect resistance. Different proteins produced by Bt genes target specific insect pests, such as European corn borers in corn and bollworms in cotton.

The curriculum’s four modules help high school students and extension youth and adult audiences:

- Explore the science behind Bt crops.
- Learn more about the crops that incorporate Bt.
- Examine the agricultural production issues for Bt crops.
- Develop a framework for evaluating ethical, social, and legal questions associated with controversial technologies and issues.

Each curriculum module is designed to be used independently or with the other modules. For educators, each module contains background information, lesson plans geared to the National Science Education Standards and 4-H skills, Internet resources, and overhead transparency masters. Informational and activity handouts that can be photocopied for students are included.

The curriculum was funded by a U.S. Department of Agriculture grant to Iowa State and eight other institutions in Minnesota, North Dakota, South Dakota, and Wisconsin that are studying the social, economic, and ethical aspects of biotechnology.

To obtain a free compact disc (CD) of the curriculum, educators in Iowa should contact the Office of Biotechnology, (515) 294-9818, or e-mail biotech@iastate.edu. Anyone is welcome to download a free copy of the curriculum from the Internet at www.biotech.iastate.edu/publications/bt_curriculum/. CDs or a printed version of the 324-page curriculum that is three-hole-punched and ready to be placed in a notebook also can be purchased from Extension Distribution, 119 Printing and...
New Reports Available
Research in Biotechnology—The annual publication by the Office of Biotechnology provides contact and research information for more than 280 faculty members in 29 departments at Iowa State who conduct biotechnology-related research. The publication also provides information on service facilities that provide research equipment and assistance to on- and off-campus researchers. The publication is available by contacting Dena Huisman, 515-294-7356 or dhuisman@iastate.edu. It is also available online at www.biotech.iastate.edu/Current_Research/tablecontents.html.

Service Facilities for Research in Biotechnology—More than 20 service facilities on campus that conduct biotechnology research for on- and off-campus researchers are profiled in this annual publication. Contact information, descriptions of services, and rates structures for on- and off-campus researchers are listed. The publication is available by contacting Dena Huisman, 515-294-7356 or dhuisman@iastate.edu. The publication is also available online at www.biotech.iastate.edu/service_facilities/.

Multiple Measures of the Role of Agriculture in Iowa’s Economy—A new report recently was released by the Iowa State University economics department that provides statistical analysis of how agriculture and industries linked to agriculture impact Iowa’s economy. The report is available online at www.econ.iastate.edu/research/webpapers/paper_10180.pdf.

Faces and Places

New Biotechnology Faculty
Every year, the Office of Biotechnology offers start-up funds to several new faculty members interested in conducting biotechnology research. Below are two recently hired faculty who are recipients of these funds.

Václav Ourednik, associate professor of biomedical sciences, earned a Ph.D. at the University of Lausanne, Switzerland, where he studied neurobiology and the development of somatosensory pathways and brain maps in the mouse.

As a senior research scholar and instructor in the Evan Snyder lab at Harvard’s Children’s Hospital, Ourednik and his wife, Jitka, focused on plasticity and regeneration of the central nervous system using stem-cell grafts. His research on using stem cells to combat neurodegenerative diseases earned him the Michael J. Fox/Parkinson’s Action Network Young Investigator Award in 2000. Ourednik currently studies the biology and genetics of neural stem cells, focusing on improvement of the cells’ regeneration-promoting potential by genetic engineering, the capacity of grafted cells to differentiate and functionally integrate in changing host environments, and on communication at the molecular level between the graft and host cells.

Ourednik can be contacted by phone at 515-294-3719, by e-mail at voured@iastate.edu, or at his office in 2048 Veterinary Medicine, Ames, IA 50011.

Jitka Ourednik, associate professor of Biomedical Sciences, earned her RNDr. at the Charles University in Prague in 1982, and her Ph.D. at the Institute of Physiology of the Czechoslovak Academy of Sciences in 1986, studying cell formation in the developing central nervous system of mammals.

From 1988, she worked at the Institute of Anatomy at the University of Lausanne, where she and her husband, Václav, formulated a new hypothesis about the protective and rescue role of grafted neural cell precursors on damaged mammalian brains. Over the last decade, she has analyzed and confirmed this hypothesis in different animal models while working at Dalhousie University in Canada, the Swiss Federal Institute of Technology, and Harvard. Her current research focuses on regenerative factors released from the grafted neural stem cells and on questions concerning the graft’s recognition and reaction to signals coming from the injured host.

Ourednik can be contacted by phone at 515-294-6449, by e-mail at joured@iastate.edu, or at her office in 2052 Veterinary Medicine, Ames, IA 50011.

Upcoming Events

June 5-8—“Transposition, Recombination, and Application to Plant Genomics,” 5th Annual Plant Sciences Institute Symposium. Discussion will focus on the combination of the biology of plant transposons and the potential applications of transposons and other recombination mechanisms, including advanced transposon tagging systems and potential uses of transposon-mediated reactions for modifying plant genomes. Registration deadline is May 5, 2003. The event is sponsored by the biochemistry, biophysics, and molecular biology department; the Office of Biotechnology; and the Plant Sciences Institute. More information and registration information is available at www.bb.iastate.edu/~gfst/phomepg.html.

October 15—Biotechnology Career Day. The fifth annual career day will provide an opportunity for biotechnology companies in Iowa to meet with Iowa State’s life science students and discuss job and internship opportunities. Companies that are members of the Iowa Biotechnology Association participate for free; non-member companies pay a small fee. To sign up for Biotechnology Career Day, go to www.biotech.iastate.edu/Industry_resources/career_day2003/industry_app.html, or contact Lisa Lorenzen, 515-294-0926 or llorenzen@iastate.edu.
Available Technologies

Iowa State University is seeking industrial partners to develop and/or commercialize the following techniques. For more information and for a complete listing of all available technologies, contact the Office of Intellectual Property and Technology Transfer at 515-294-3893 or www.iastate.edu/~isurf.

Improved Starches Developed for Better Digestibility
Researchers at Iowa State University have developed procedures to make starches with increased solubility from potato, corn, and other plants. Certain carbohydrate polymers, such as dextrin, fructose, lactose, sucrose, and glucose, are widely used in infant formula, liquid nutritional supplements for adults with compromised digestive function, liquid carbohydrate supplements for athletes, and solid-food products. Unmodified, these polymers may have negative gastrointestinal effects, such as diarrhea, distention, and limited availability of water for hydration purposes due to high osmotic activity. Polymers of dextrin and glucose cause high insulin responses and can lead to elevated insulin secretion and increased risk of cardiovascular diseases. The modified starches have been shown to minimize these negative effects and could be used in the food and diet industries. ISURF #10835

Soybeans with Modified Fatty Acids
Researchers at Iowa State University have developed four new varieties of soybeans that have modified fatty acid composition for improved health qualities. The soybeans were developed using traditional breeding procedures, so they will be useful to those interested in producing soybean oil with unique characteristics or providing non-GMO grain to appropriate markets. The varieties are available on a non-exclusive basis and can be branded for commercial purposes. Requests for information on agronomic performance should be directed to Walter Fehr, 515-294-6865 or wfehr@iastate.edu. Requests for information on licensing should be directed to Julie Gustafson, ISURF, 515-294-9442 or jjgus@iastate.edu.

Research Update

The following are a subset of the grants recently awarded for biotechnology-related research at ISU. For more information about establishing research relationships with ISU biotechnology researchers, contact Lisa Lorenzen at llorenze@iastate.edu.


