

Contact: Ann McCarthy

REGENTS INNOVATION FUND PROPOSED AWARDS

Action Requested: Consider approval of Regent universities' FY 2013 Innovation Fund proposed awards.

Executive Summary: The 2012 Iowa General Assembly approved an FY 2013 Regents Innovation Fund appropriation of \$3 million. This newly titled funding stream replaces the Regents' allocation from the Grow Iowa Values Fund, which the three Regent universities received from FY 2006 through FY2012.

The funds are for *"capacity-building infrastructure in areas related to technology commercialization, entrepreneurship, and business development for the purposes of state economic development."*

Each of the universities has submitted a proposal for how it will direct a share of these appropriations in FY 2013. The \$3 million in funding will be matched on a one-to-one basis from a variety of sources including: private companies participating in projects, university matching funds, client and testing fees, and non-state research grants.

The universities' proposals are summarized in this memo. Complete proposals are included on the Board of Regents' website.

Iowa State University: \$ 1,050,000

Iowa State University proposes to allocate the FY 2013 funds consistent with the proposal presented to the Board of Regents in FY06, but with an improved process and emphasis on pulling technologies toward commercialization.

FY13 Funding Summary:

SBDC (Regional Centers)		\$ 105,000
Infrastructure and Entrepreneurial Culture		\$ 245,000
ISU Research Park	\$ 75,000	
ISU Pappajohn Center	\$100,000	
Biobased Foundry Pilot Project	\$ 50,000	
Vice President for Research	\$ 20,000	
Commercialization Start up Program		\$ 500,000
Infrastructure Projects and Programs		<u>\$ 200,000</u>

Annual Funding During This Period **\$1,050,000**

System for Innovation

The Iowa State University *System for Innovation* is focused on the transfer of university technologies into commercial applications in startup or existing companies. This System is coordinated by the Vice President for Research and Economic Development and has demonstrated significant success over the years. It recognizes that the fuel for a technology transfer/commercialization system is faculty and staff research. The funding is used to support aspects of the System for Innovation including the following two examples:

Infrastructure and Entrepreneurial Culture \$245,000

This funding will support the people and activity required to grow, improve, and sustain the technology transfer/commercialization efforts at ISU. The progressive improvement is critical if the entrepreneurial culture at ISU and the *System for Innovation* is to achieve its full potential. The people are what truly make a difference in the acceleration of growth.

Commercialization Startup Program \$500,000

The purpose of this program is to build and sustain a pipeline of projects that will lead to increased commercial activity by new and existing Iowa companies. There is also a need to identify and foster new projects that have potential to contribute significantly to Iowa's economy. Because of funding reduction, ISU has eliminated the portion of the commercialization program that focused on technologies appropriate for existing companies and are focusing the resources on technologies that can lead to new Iowa companies. ISU proposes to use the resources to pilot ISU's new **Innovate Iowa Proof of Concept (IPOC)** initiative. This initiative is envisioned to take the progress made with the GIVF funds and move it to the next level. Instead of just funding projects, in parallel ISU will put resources toward market research, mentoring and other services to accelerate the growth the new companies. These funds will be used to demonstrate the value of proof-of-concept in de-risking early-stage discovery (technology) into a validated, robust package at a meaningful pilot scale that meets performance, cost, and quality criteria for commercialization.

Process

Projects will be selected by an application process. Projects will be funded in \$50,000 increments, with \$100,000 possible over an 18-24 month period. Projects will be monitored for progress toward commercialization and further funding is contingent on meeting the milestones. A successful outcome of a project that is funded through the IPOC will be companies that are ready to attract additional outside funding such as programs offered by the Iowa Economic Development Authority or angel, seed cap, or venture funds.

Infrastructure and Entrepreneurial Culture \$245,000

This funding will support the people and activity required to grow, improve, and sustain the technology transfer/commercialization efforts at ISU. The progressive improvement is critical if the entrepreneurial culture at ISU and the *System for Innovation* is to achieve its full potential. The people are what truly make a difference in the acceleration of growth.

University of Iowa: \$1,050,000

FY13 Funding Summary:

Proof of Concept	\$ 525,000
Entrepreneurial Education & Business Support	\$ 133,500
Infrastructure Investment For Growing Start-up companies	<u>\$ 391,500</u>

Annual Funding During This Period \$1,050,000

The University of Iowa (UI) is requesting funding to strengthen their capacity to enhance technology transfer, commercialization, job creation and economic development in the State of Iowa. The UI research enterprise continues to attract large amounts of peer reviewed federal research funding and is an increasingly important asset critical for innovation and job creation that will position Iowa to be competitive in the global economy. The UI, along with the other

Regents institutions, has been a strong partner with industry and government in transforming Iowa's economic development programs into an innovation driven model and recent progress in creating more synergy has proven highly productive. With continued state and private investment, UI can continue to capitalize on these earlier investments to enhance our technology transfer capacity, while helping create significant growth in jobs in Iowa's targeted industry sectors as Iowa strives to compete in the global economy of the 21st century.

The Regents Innovation funds will allow the UI to continue to invest in high value intellectual property that derives from faculty research and enhances technology transfer and commercialization through the concerted efforts of our integrated model involving the Iowa Center for Enterprises (UI Research Park, the John Pappajohn Entrepreneurial Center (JPEC) and the UI Research Foundation). The ultimate goal is to facilitate university-private sector partnerships in entrepreneurship and continue to create new companies in Iowa based upon UI technology.

Proof of Concept Funding \$525,000

Exciting discoveries from University research are, by definition, very early stage and require sustainable sources of funding to take nascent intellectual property to the point where private investment is viable. This gap between federal support and private support to move ideas towards commercialization has been termed the "valley of death". UI plans to carefully invest a significant portion of the Regent's Innovation Fund to help sustain exciting research through the critical proof-of-concept phase, which if successful will position this technologies and ultimately start-up companies to compete effectively for private and federal SBIR/STTR funding. These funds are critical for:

- University-private sector collaborations for "proof-of-concept" support for the commercialization of UI- or Iowa-related intellectual property.
- Gap funding for early-stage technologies and startup companies based on UI- or Iowa-related intellectual property.
- University-private sector formation and development of startup companies in Iowa directly related to existing UI- or Iowa-related intellectual property.
- Competitive funding to stimulate new ideas among our highly entrepreneurial faculty.

Entrepreneurial Education & Business Support \$133,500

JPEC will continue its efforts to significantly enhance entrepreneurship education in Iowa and seek economic development across Iowa through unique programming and partnerships. These funds will:

- Provide community and regional entrepreneurial training through the FastTrac program and specialized seminars, speaker events and workshops to meet the needs of aspiring entrepreneurs in partnership with several entrepreneurial development organizations.
- Partner with Iowa industry and the entrepreneurial business community to identify experiential learning opportunities for students and help to facilitate internship opportunities between top UI students in JPEC's Entrepreneurial Management Institute and Iowa technology-based companies.
- Direct and coordinate initial concept and new venture funding competitions at UI. Elevator pitch competitions identify new venture opportunities and provide initial seed awards to assist aspiring entrepreneurs to further develop and enhance their business concepts. Business plan competitions provide early-stage funding to support the launch of new ventures.

Infrastructure Investment For Growing Start-up companies \$ 391,500

As companies mature, UI must provide unique facilities to foster and incubate technology based companies as well as facilitate linkage with key university core resources. The requested funds would continue to invest in technology development infrastructure to strengthen and accelerate commercialization and support critical economic development support functions associated with the UI Research Park, BioVentures Center, Technology Innovation Center and ICE. These funds will:

- Assist faculty who are considering the creation of a new venture based on their research and innovations. An experienced entrepreneur will lead a menu of services to faculty as they navigate through early stage business planning and development activities. This includes linking faculty to UI resources, external funding opportunities and identifying industry experts and business mentors.
- An Incubator company funding competition intended to stimulate original ideas and serve as leverage for other funding sources, prototyping, or new product development. Proposals will be reviewed based on their impact on economic development, the viability of their business concept, and the feasibility of their business model.

University of Northern Iowa: \$900,000

Economic Gardening and Entrepreneurship Outreach	\$ 300,000
Technology Transfer and Business Incubation	\$ 300,000
Regional Development	\$ 100,000
Competitive Intelligence Experiential Learning Program	\$ 50,000
National Ag-Based Lubricants (NABL) Center	<u>\$ 150,000</u>

Annual Funding During This Period \$ 900,000

Economic Gardening and Entrepreneurship Outreach \$300,000

In FY13, UNI Entrepreneurship Outreach proposes to launch a statewide Economic Gardening (EG) program in Iowa to address a compelling need among smaller, locally-owned employer firms for actionable business intelligence and support. UNI will create and certify a strategic research team in accordance with the National Center for Economic Gardening to provide Stage II companies (those with 9-99 employees) with secondary market research and business intelligence.

- a. The Iowa Economic Gardening Network** In May of 2012, UNI was named the Economic Gardening Hub for the state of Iowa by the National Center for Economic Gardening. UNI has assembled an in-state team of certified EG research team professionals. A certified EG team will meet with the selected businesses individually and provide the business owner with business intelligence (market, industry, competitive) and recommendations associated with growth and expansion. UNI is working with the Iowa Economic Development Authority to secure funding and additional state support for the Iowa Economic Gardening Network.
- b. Reconfigure Multiple MyEntre.Net Resources into Stand Alone Program Modules** Key resources of MyEntre.Net will be scaled and shared with EDOs throughout Iowa as web-friendly tools to assist in identifying, attracting and serving small businesses online. MyEntre.Net bi-monthly e-news and the annual statewide small business survey will continue in their current form. Three resources will be scaled in FY13 including:

Dream Big Grow Here - Dream Big Grow Here (DBGH) is an online contest for small Iowa businesses to win up to \$15,000 and generate statewide publicity around their small businesses.

Business Concierge - The Business Concierge provides small business owners free access to business intelligence and personal referrals to an Iowa service provider partner or source of capital. In FY13, the Business Concierge program will be built out as a plug-in technology module.

E-Learning - Bi-monthly webinars at MyEntre.Net are one of the most popular features of the site. In FY13, a plug-in module will be developed to make it possible for webinars to be accessible by regional EDO websites and custom designed as a local resource.

- c. **EntreFest!** UNI will lead a consortium of 15-20 service providers and private partners in the delivery of the sixth annual EntreFest!, Iowa's conference for small businesses and entrepreneurs.

Technology Transfer and Business Incubation \$300,000

UNI continues to advance intellectual property evaluation and protection, commercialization of campus innovations through licensing/strategic partnerships, and new business development. One of the key goals for FY13 is to expand the culture of innovation across campus. A number of proposed services directly impact this goal, including the Innovation Incubator and a special foundry innovation project. UNI also will expand linkages between the University and the Iowa business community. Specific priorities for FY 13 are:

- a. **Business Incubation:** UNI will focus programming toward the Innovation Incubator on the UNI campus. Services will be expanded to include additional co-work space and innovative programming to accelerate tenant growth. Minor support will also be provided to the student business incubator, which continues to graduate successful student businesses into the regional economy.
- b. **Technology Transfer:** Intellectual property development at UNI continues to mature. Our goals for FY 13 are to develop new technologies for commercialization, increase corporate sponsored research, license two existing technologies, start two companies using UNI technology and expand collaborations with our fellow Regent institutions.
- c. **Special Metal Casting/Iowa Foundry Project:** For the last 22 years, the core emphasis of the Metal Casting Center has been developing technological advancements to improve the efficiency of the foundry industry. The center has been very successful in helping suppliers to the industry along with developing independent technological advancements for foundries. New technologies and innovations will be pursued during FY13 in areas such as binders, new materials, process efficiencies, materials testing and research, and specialized training.

Regional Development \$100,000

Building upon its expertise and understanding of regional development, the Institute for Decision Making (IDM) will offer targeted economic development assistance to further build capacity and sustain Iowa's regional economies into the future. Specific priorities for FY 2013 are:

- a. **Reorganizing Iowa's Regions:** IDM will lead an effort to assess and structure Iowa's regions for economic growth. The primary emphasis in FY13 will be asset mapping to determine regional strengths and linkages and thereby outline the most appropriate

- regional boundaries. IDM will collaborate with the Professional Developers of Iowa on this assessment.
- b. **BEST of Iowa Partnership:** In partnership with the Iowa Economic Development Authority (IEDA), Regent universities, community colleges, utilities, Professional Developers of Iowa (PDI) and the Iowa Department of Education, IDM will enhance the Business Expansion & Strategic Trends (BEST) of Iowa program. IDM will assist with improving data collection and analysis at state and regional levels.
 - c. **Entrepreneurial Communities Project:** IDM will actively pursue two pilot entrepreneurial communities projects (ECP) with the UNI Regional Business Center and their MyEntre.Net program. IDM staff will lend research and strategic planning expertise to this project, as well as provide customized technical assistance to meet each community's needs and foster regional collaboration.

Competitive Intelligence Experiential Learning Program \$50,000

Strategic Marketing Services (SMS) will develop and manage a competitive and market intelligence program for mid-sized Iowa companies to stimulate business expansion. Accurate information is needed to make sound market entry or expansion decisions. Gathering and using data to make decisions is what SMS provides. Established businesses will be required to pay at least one-half of their project cost. SMS expects to assist at least five Iowa companies with advanced competitive and market intelligence projects. Priority will be given to businesses in the state's target industry clusters.

SMS will also consult with Iowa businesses, entrepreneurs, statewide associations and local governments to develop market research plans. In some cases, the client may wish to undertake some or all of the research activities on their own, utilizing the market research plan as a guide. The final piece of competitive and market intelligence assistance will be devoted to phase one market research feasibility assessments for the technology transfer process.

National Ag-Based Lubricants (NABL) Center \$150,000

UNI's National Ag-Based Lubricants (NABL) Center offers a full spectrum of customized research and biobased lubricant development capabilities. Testing clients and research partners include both small to medium local and regional industries and large, multinational corporations. FY13 research will explore modified vegetable oils and vegetable oil derivatives for products with superior lubricity, cold temperature performance, and increased oxidative stability. Three specific focus areas are:

- a. **Evaluate and Enhance Microwave Lubricant Production Technology** Partner with Cedar Rapids-based companies (Marion Mixers and AMTek) to investigate the effectiveness and economics at pilot-scale production levels of a new microwave-based lubricant production technology. Measure and evaluate final product quality differences and identify major cost drivers in vegetable lubricants processes for comparison of microwave vs. traditional methods, demonstrating comparative cost advantages vs. petroleum products.
- b. **Specific Research of Vegetable Oil Based Products** Fundamental research activities include ongoing development of a Continuous Oil Recirculation System (CORS) incorporating biobased oils and derivatives into the diesel engine crankcase; fundamental vegetable oil research targeting new methods of improving the inherent characteristics and fundamental properties of vegetable oils; and comparative evaluation of prevalent biobased esters to determine viability as biobased lubricants and

greases - this research identifies technologies to enhance the oil's inherent characteristics.

- c. Support Iowa's Biobased Products Industry** NABL scientists will continue active participation with industry organizations and provide appropriate standardized testing methods and industry compliance to help prevent sub-par products from entering the marketplace, thus protecting consumers, end-users and producers.