

Contact: Andy Baumert

ANNUAL ECONOMIC DEVELOPMENT AND TECHNOLOGY TRANSFER REPORT

Actions Requested: Consider recommending the following to the Board:

- 1) Receive the report.
- 2) Direct that this report and copies of complete institutional reports be forwarded to the Secretary of the Senate, the Chief Clerk of the House of Representatives, the Legislative Services Agency, the Office of the Governor and the Director of the Iowa Department of Economic Development pursuant to Iowa Code §262B.3, HF 809 §19 (2005 session), and HF 2459 §19 (2006 session).

Executive Summary: The Regent universities promote the economy of Iowa primarily by providing higher education to the people of the state. They also strengthen the Iowa economy by conducting academic research – most notably when it results in intellectual property and applications in the marketplace – and by providing expertise and assistance directly to Iowa's people, industry and communities. The Regent universities thus support the economy of Iowa primarily through their core missions, and their economic contributions to the state are fundamentally linked to their overall academic excellence.

This core mission was supported by \$673 million in funding from gifts, grants and contracts, which includes sponsored funding by federal and corporate sources in FY 2006. This funding provided the basis on which the Regent universities conducted world class research initiatives, resulting in technology discoveries and technical expertise which were then made available for commercialization through a broad array of economic development and technology transfer programs. Highlights in the past year include:

- 220 new intellectual property disclosures
- 235 patent applications
- 80 new patents
- 185 new license and option agreements on intellectual property
- 402 total license and option agreements yielding income
- \$24.62 million in royalty and fee income
- \$44.79 million in revenue generated by Iowa companies as a direct result of university technologies
- 2,124 Iowans employed at 81 companies at the SUI and ISU research parks
- 40 companies and entrepreneurs involved in commercialization projects funded by the Battelle legislation
- 37 companies involved in commercialization projects funded by the Grow Iowa Values Fund legislation
- \$49.5 million in matching funds provided by the universities and companies participating in Battelle projects
- \$5.5 million in matching funds provided by the universities and companies participating in Grow Iowa Values Fund projects
- 10,000 businesses and individuals representing all 99 Iowa counties received technical services and training through the economic development and technology transfer programs at the three universities

Engagement

Many organizational units at the Regent universities are engaged with Iowa's people, industry and communities for the promotion of the state's economic development. Key economic development efforts include: research, intellectual property development and technology transfer, business incubation and acceleration, direct technical assistance to local and regional economic development groups, technical assistance and counseling to businesses, market research for Iowa companies and attracting and retaining businesses in the state. These activities are also highly coordinated with the economic development efforts of the Governor, the Iowa General Assembly, and state agencies including the Iowa Department of Economic Development.

State Funding for Economic Development and Technology Transfer

State funding in FY2006 was provided in three primary economic development program areas:

1. Ongoing Economic Development and Technology Transfer Programs: \$3,071,853

In FY 2006, the state provided \$3,071,853 for several ongoing programs which include the research parks at SUI and ISU, the Institute for Physical Research and Technology, the Small Business Development Centers, the Institute for Decision Making, the Metal Casting Center and the Center for Advanced Drug Development. Since FY 2001, state appropriations for these programs have declined from \$7.63 million to \$3.071 million. These programs were responsible for providing technical services and training to more than 10,000 individual businesses and communities throughout every county in Iowa in 2006.

2. Grow Iowa Values Fund (GIVF): \$5,000,000

In FY 2005, the General Assembly authorized an annual appropriation of \$5 million under the GIVF to the Regent universities for purposes of supporting the human and physical infrastructure needed to effectively develop and transfer technology discoveries. In 2006, the Regent universities used the GIVF appropriation to strengthen the technology transfer capabilities at each campus and to fund development projects involving 37 companies and start ups. The universities and companies involved in the projects provided more than \$5 million in matching funds for the projects. Examples of projects involving private companies included:

- Seed funding to assist a group of SUI researchers developing new cell therapy techniques for treatment of Alzheimer's and Parkinson's disease. A startup company called RepGenix is being formed.
- Seed funding to assist two SUI researchers who are collaborating with the firm ASL Analytic to develop a portable infrared spectrometer for the easy measurement of glucose in the treatment of diabetes, eliminating the need to draw blood.
- A project involving ISU researchers and Midwest Grain Processors, Lincolnway Energy and Quad County Corn Processors to use ultrasonication in corn milling plants to increase ethanol yield.
- A project involving two ISU researchers and the firm Starch Design to develop food-grade digestion-resistant starches which could lower the human weight-gain impact of foods containing the starch.
- Expansion of UNI's successful MyEntreNet rural development program which has provided services to more than 360 rural Iowa entrepreneurs.
- Expanded biolubricant testing at the National Ag-based Lubricants Center filling the industry's need for expert support in this developing market.

Private College Grant Program

Of the \$5 million in GIVF funding, \$200,000 was awarded by the Board of Regents to the University of Dubuque to fund a research and commercialization project. The project is designed to establish whether or not a particular enzyme is involved in the uptake of iron by certain organisms which may determine if the enzyme can be used as a vaccine.

3. Battelle Economic Development Appropriations: \$20,000,000

The Iowa General Assembly authorized \$20 million in FY 2007 funding to the Regent universities for economic development activities in three key platform areas of biosciences, advanced manufacturing and information technology. Of the total, \$5 million was designated to be used for endowed chairs and faculty salaries, \$6.8 million for related physical infrastructure and \$8.2 million for general support of projects in the key platform areas.

Nearly all of the projects include matching funds, either from businesses, the universities or federal agencies, even though matching funds for these platform projects is not required by the legislation. The aggregate amount of industry/university/federal matching funds for all three universities is \$49.5 million, resulting in a better than 5 to 1 matching ratio with the \$8.2 million in Battelle platform funding provided. The \$6.8 million of infrastructure proposals are highly integrated to supply key infrastructure support for the research and commercialization efforts proposed in the platform projects. The \$5 million in endowment and faculty salary funding will attract or retain several top quality faculty members whose research in the targeted platform areas has the highest potential for commercialization. A one-to-one match is required for any funds used for endowed chair positions. SUI and ISU will use their allocation of that \$5 million for endowed chairs. SUI will match the funds on a one-to-one basis and ISU will match on a two-to-one basis.

The \$8.2 million in Battelle platform funding will support 23 projects with research participation or investment by more than 40 companies and entrepreneurs to create new products and technology services. Examples include:

- Battelle funding will allow the SUI Oakdale Research Park to provide laboratory space for a California wound healing and skin products company called Dermacia/NGI that plans to employ 178 people with a payroll of \$7.7 million within three years.
- Battelle funding will enable a research collaboration between ISU and Genetic Enterprises International of Johnston to commercialize new lines of corn that produce what is known as resistant starch which has much less impact on human weight gain when eaten than conventional starch. The resistant starch will be targeted for production of products like tortillas in the fast growing ethnic food market.
- Battelle funding will enable the UNI Waste Reduction Center to partner with the Davenport-based Marco Corporation to commercialize laser-guided paint blasting technology. Marco will become the only company in North America able to offer this cutting-edge technology.

The full annual reports from the universities are included in the Regent Exhibit Book and will be provided to the General Assembly, the Governor's Office, the Legislative Services Agency, and the Iowa Department of Economic Development.

Table 1: Intellectual Property, Technology Transfer, and External Support FY2004-2006

Indicators	FY 2004				FY 2005				FY 2006			
	ISU	SUI	UNI	Regents Totals	ISU	SUI	UNI	Regents Totals	ISU	SUI	UNI	Regents Totals
1. Number of disclosures of intellectual property	110	86	3	199	142	83	4	229	120	89	11	220
2. Number of patent applications filed	52	118	3	173	54	115	3	172	52	178	5	235
3. Number of patents issued	27	46	2	75	15	34	2	51	19	56	5	80
4. Number of license and option agreements executed on institutional intellectual property	166	47	1	214	218	35	1	254	140	43	2	185
5. Number of license and option agreements yielding income	362	164	5	531	317	176	9	502	299	92	11	402
6. Royalties/license fee income (\$ million)	2.80	10.73	0.03	13.56	4.90	18.05	0.06	23.01	8	16.3	0.32	24.62
7. Revenue to Iowa companies as a result of licensed technologies ¹ (\$ million)	18.0	0.74	2.66	21.40	22.00	1.08	4.16	27.24	38	0.89	5.9	44.79
8. Total sponsored funding (\$ million)	274.22	333.30	32.58	640.10	286.90	359.60	33.07	679.57	279.7	366.4	19.96	666.06
9. Sponsored funding for research (\$ million)	163.08	267.55	2.46	433.09	179.80	276.78	2.47	459.05	171.4	269.6	1.11	442.11
10. Corporate-sponsored funding for research and economic development ² (\$ million)	25.25	30.38	1.76	57.39	28.50	31.23	1.92	61.65	28.6	31.9	1.76	62.26
11. Iowa special appropriations for economic development ³ (\$ million)	2.37	0.25	0.36	2.98	2.37	0.25	0.36	2.98	2.46	0.24	0.36	3.06

¹Aggregate sales reported by Iowa companies of products and services based on licensed inventions.

²Excludes corporate philanthropy.

³Excludes GIVF and Battelle Funding.

FY 2007 Economic Development Appropriations							
	Ongoing Appropriations	State Appropriations			Matching		
		GIVF	Battelle	Total	GIVF ¹	Battelle ²	Total
SUI: -Oakdale Research Park -Center for Advanced Drug Development	\$247,005	\$1,925,000	\$8,410,000	\$10,582,005	\$1,927,541	\$40,973,000	\$42,900,541
ISU: -Institute for Physical Research and Technology -Small Business Development Centers -Research Park	\$2,463,557	\$1,925,000	\$8,410,000	\$12,798,557	\$1,925,000	\$7,225,573	\$9,150,573
UNI: -Metal Casting Center -Institute for Decision Making	\$361,291	\$950,000	\$3,180,000	\$4,491,291	\$1,706,578	\$651,114	\$2,357,692
Totals	\$3,071,853	\$4,800,000	\$20,000,000	\$27,871,853	\$5,559,119	\$48,849,687	\$54,408,806

¹Matching funds required by law.

²Matching funds not required by law; excludes matching funds for endowed chairs.