Louisiana EPSCoR

EXPERIMENTAL PROGRAM TO STIMULATE COMPETITIVE RESEARCH VOL.9 NO.4 FEBRUARY 2013

Economic Development Comes Full Circle with OPT-IN

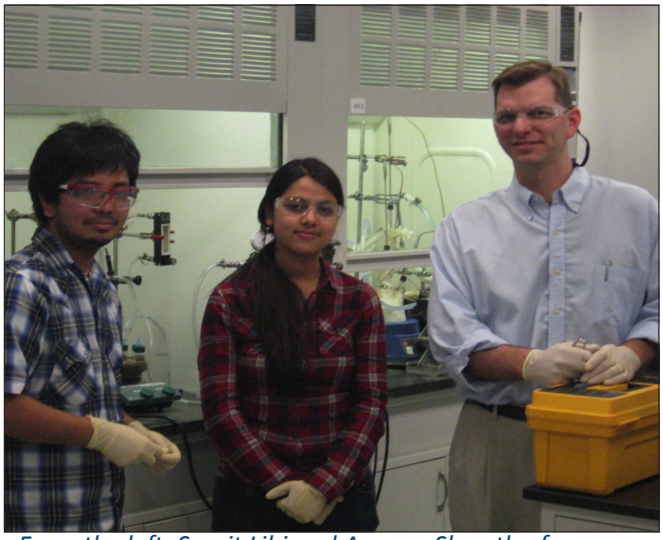
This is part 1 of a 2 part series on the benefits & successes of OPT-IN.

Build sustainable relationships between academia and industry. Facilitate the commercialization of research. Enhance research competitiveness. Contribute to the economic development of Louisiana. These are the goals of Louisiana EPSCoR's Opportunities for Partnerships in Technology with Industry (OPT-IN) program, and arguably, of every higher education institution across the State.

OPT-IN is one of several initiatives Louisiana EPSCoR has developed to promote economic development. "Fiscal challenges and global competition threaten the US's premier leadership position in science – and therefore, our economy," said Michael Khonsari, Associate Commissioner for Sponsored Programs Research and Development. "Louisiana strives to attract high-tech, knowledge-based industries, to promote economic development and bring high-paying technical jobs to the State."

Tenured, tenure-track or full-time research professors in science and engineering (S&E) disciplines are eligible to apply for funding to partner with industrial entities to attain these goals. OPT-IN, which is about to enter its fifth round of competitive award granting, has to-date distributed 23 OPT-IN grants to seven institutions, totaling more than $700,000.

These grants are competitively awarded in one of two categories. The first, Category I, is research focused and provides from a minimum of $10,000 to a maximum of $50,000 in funding for one year. A cash match from an industry sponsor is required for this award category. The funding provided by the State is based on the amount of cash match provided by the industry partner. Some Louisiana-based companies have even partnered with multiple universities for different grants. Companies such as Sasol North America, Cleco Power, LLC, Bercen, Inc., and Autoimmune Technologies, LLC are playing vital roles in collaboration in the research and development at Louisiana universities across the state.



From the left: Sumit Libi and Apsana Shrestha from Southeastern posing with Joseph Harrell, Jr. , a Chemist at Bercen Inc.

One such successful partnership has developed between Dr. Jean Fotie at Southeastern and Bercen, Inc. which is based in Denham Springs and is one of the largest manufacturers of the paper sizing agents alkenyl succinic anhydrides (ASAs) in the world. Dr. Fotie's research is aimed at investigating certain chemical derivatives as potential sizing agents for the paper industry. Globally, paper and board production is an important branch of industry, with a total value close to $200 billion annually. According to Dr. Fotie, "because large demands also imply large production volumes, and since paper is a direct derivative of wood chips and kraft pulp, it is economically and environmentally essential that the production processes are constantly developed." Thus, this branch of industry within the US is currently searching for ways to decrease production costs and increase gross margins. Louisiana's ample forests have made it prominent for paper manufacturing and processing. Therefore, contributions to the development of new and improved paper-processing techniques would

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>
> ***- Dr. Michael Khonsari, Associate Commissioner for Spsonsored Programs Research and Development***

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have a positive economic impact in Louisiana and the nation. "This work is important to the future success of our Louisiana-based company, and we are fully committed to support and continue to support, the work of Dr. Jean Fotie to develop new paper sizing agents," said Joseph Schaffer, Director of Technology at Bercen.

Once university research has reached the point of readiness to develop a prototype, a Category II OPT-IN grant may be applied for. This award, with a maximum funding level of $20,000, is to be used for prototype development, which can result in the commercialization of a product or formation of a spin-off company. A Category I award is not a prerequisite for a Category II award.

Dr. Yuching Liu at the University of Louisiana Lafayette (ULL) received a Category II grant with the help of Manufacturing Extension Partnership of Louisiana (MEPoL) also in Lafayette, to create a project focused on the design, modeling, and evaluation of a cost effective particulate control system. Particulate control systems are being broadly used in space and aerospace industries and many other commercial sectors for removal and disposal of particles and controlling contamination. "Existing particulate control systems are very complex, with associated high manufacturing and maintenance costs," said Dr. Liu. His team at ULL designed and built a cost effective, portable particulate control system prototype for experimental validation and evaluation. Dr. Liu's research and prototype evaluations were published by the SAE International Journal, which features work of engineers and related technical experts in the aerospace, automotive and commercial-vehicle industries. In his journal article, Dr. Liu wrote that, "in summary, due to its low cost, portable size, and high flexibility, the developed system has bright prospects for commercialization and has the potential to benefit many industries."

Technology transfer is one example of the benefits of continued investment in Louisiana's research and development, which results in product development or solves industry problems and creates start-up companies, all of which will ultimately produce jobs and keep research talent within the State.

More about OPT-IN and its successes and benefits continue in part 2 of this series.

Louisiana EPSCoR is a catalyst for fosterng university-industry partnerships that strengthen Louisiana's scientific research and educational infrastructure, as well as contributing to the overall economic development of the state.

The Opportunities for Partnerships in Technology with Industry (OPT-IN) program is designed for full-time Louisiana faculty members in science and engineering disciplines seeking funding to partner with industrial entities to build sustainable relationships between academia and industry, facilitate the commercialization of research, enhance research competitiveness, and contribute to the economic development of Louisiana.

The deadline for applications for an OPT-IN award is May 3, 2013.

To download an RFP or get more information about the submission process, go to web.laregents.org or call 225.342.4253.

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