

From the Columbia Regional Business Report

## **Centers of Economic Excellence reports successful fiscal year 2008**

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Staff Report

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Even in a down economy, South Carolina's Centers of Economic Excellence has continued to attract investment to the state. Between June 2007 and April 2009, the CoEE endowed chairs program received non-state investments of more than \$54 million.

Since the program began in 2002, it has brought in more than \$250 million and has filed 110 invention disclosures and 49 U.S. patent applications. Thirteen spinoff companies have been created. It has appointed 22 endowed chairs at the state's three research universities—Clemson University, the Medical University of South Carolina and the University of South Carolina.

The CoEE Review Board released its annual report to the members of the General Assembly and the State Budget and Control Board.

The report highlights the program's accomplishments through the end of fiscal year (FY) 2008.

The CoEE program was created by the S.C. General Assembly to stimulate research and development and high-wage job creation. The program recruits world-class scientists and engineers to the state to lead university-based research centers. The purpose of the centers is to increase public-private research partnerships, create well-paying jobs and improve the quality of life for the people of South Carolina.

The economic impact in FY 2008 include:

- CoEE endowed chairs and their research teams attracted external funding to South Carolina, particularly in automotive-, energy- and nanotechnology-related areas. The CU-ICAR chairs and their research teams were awarded 33 grants totaling more than \$5 million from federal and corporate sources. Faculty associated with the Solid Oxide Fuel Cells CoEE generated more than \$26 million in proposed research funding, including a \$22 million Department of Energy proposal. The CoEE in Polymer Nanocomposites received an \$865,000 research grant from NSF, MeadWestvaco and Montan Polysaccharides.
- CoEEs also attracted major health-related funding to South Carolina in 2008. The SeniorSMART CoEE received \$3.9 million in research funding from the National Institutes of Health, the Fullerton Foundation and S.C. Health and Human Services. The

Health Facilities Design and Testing CoEE was awarded a subcontract with the U.S. Department of Defense entitled “Patient Room of the Future”; the first two phases provided the CoEE with more than \$850,000 in research funding. The Renal Disease Biomarker CoEE received \$4.4 million in federal research funding. Health Care Quality CoEE endowed chair Dr. Iain Sanderson received a \$7 million grant from the Federal Communications Commission to enhance rural health care through telecommunications and information services. In addition, the CoEE in Cancer Drug Discovery had more than \$3.7 million in sponsored federal funding, and the Vision Science CoEE obtained research contracts totaling more than \$1.5 million from a number of companies including Bausch & Lomb and Pfizer.

- Research conducted at the Stroke Center of Economic Excellence, a collaborative program between USC and MUSC, has reshaped rural stroke care in South Carolina. In May 2008, the REACH network was activated. Doctors at MUSC are able to treat stroke victims at community hospitals through remote telemedicine. In just a few months at McLeod Health in the state’s Pee Dee region, twice the number of stroke patients were treated with a life-changing stroke therapy than had been treated in the full previous year.
- FY 2008 saw several new partnerships form for the Clemson University International Center for Automotive Research, which serves as an umbrella for the automotive-related CoEE. Mazda North American Operations partnered with CU-ICAR by providing graduate fellowships, drive trains and a Mazda CR 7 Crossover vehicle for testing. California-based Ozen Engineering, with its associates CADFEM GmbH in Germany and EnginSoft SpA in Italy, decided to locate their North American headquarters at CU-ICAR. Automotive software company INTEC, U.S. Inc. also chose CU-ICAR as the site for its U.S. presence.
- FY 2008 saw the opening of two patient simulation training labs, part of the Clinical Effectiveness and Patient Safety CoEE (MUSC/USC). The centers, one located in Greenville and one in Charleston, will train health care personnel around the state so that medical errors are reduced. Each lab is equipped with computerized mannequins that simulate human reactions, allowing those being trained to improve their techniques without risking harm to actual patients. More than 2,800 students and practicing health care workers have participated in simulation activities in areas including emergency team training, difficult airway management and labor delivery skills.
- Through the end of FY 2008, the CoEE program had attracted \$264 million in non-state investment in the South Carolina economy, including \$119.7 million in private and federal funds and \$122 million in external research grants. In FY 2008, the BlueCross BlueShield of South Carolina Foundation announced a \$5 million pledge for the Regenerative Medicine CoEE, which supports research in developmental biology, adult stem cell technology and tissue engineering. Fluor Corp. made a \$2 million matching commitment to Clemson University to create a new CoEE endowed chair in supply chain and logistics. Several other companies from within and outside the state also chose to invest in the program.
- In other positive news related to the CoEE program, SC LightRail went online in 2008. SC LightRail is a dedicated, high-speed communication network that links the state’s senior research universities to the National LambdaRail. SC LightRail provides support for the development of new or expanding business segments, such as biomedicine and

bioengineering, which rely heavily on imaging. It reduces costs by enabling the universities to pool resources instead of purchasing duplicate systems.

A full copy of the FY 2008 annual report is available online at [www.sccoee.org](http://www.sccoee.org).