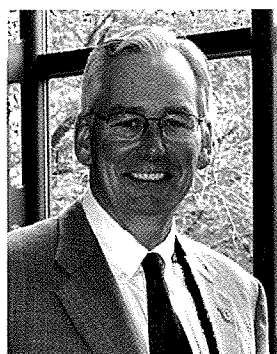


FEATURE ARTICLE

South Carolina: Accelerating the Economics of Science

"If we invest in basic science, intellectual capital and facilitate entrepreneurship, we're going to have winners. We just have to stick with it."

- Bill Mahoney, CEO, South Carolina Research Authority



Bill Mahoney, CEO of the South Carolina Research Authority, marvels at the return on the state's investment in knowledge-based economic development that has accelerated science into an economic force in less than five years.

Clemson University's Institute for Biological Interfaces of Engineering is an example of the type of partnerships that are the core of the state's efforts. The program cuts across the school's scientific disciplines to fulfill the mission of developing three-dimensional tissue test systems for use in numerous applications like new drug discovery and cancer research. Clemson takes the collaborative spirit off campus. Bioengineering professors and graduate students work and study at the Medical University of South Carolina's campus where they have the advantage of including clinicians directly into their research.

The same collaborative spirit helped MUSC attain \$200 million in research funding, a record level, and convinced Nexus Medical Partners, a venture capital firm headquartered in Boston, MA, to open a Charleston office. Nexus Partners announced in October that they've recruited U.K.-based Myconostica to South Carolina to launch the "world's first" real-time molecular diagnostic that simultaneously tests for disease-causing fungi *Aspergillus* and *Pneumocystis*.

"The South Carolina General Assembly has proven to be very far sighted," Mahoney said. "The series of legislation that started in 2002 and culminated in 2007 got everything started (in terms of) recruiting and retaining world class scientists at the major universities."

Health Sciences SC is one example of a public-private partnership that formed in 2004 to capitalize on the passage of the Life Sciences Act and Venture Capital Investment Act. Greenville Hospital System University Medical Center, Palmetto Health, MUSC, University of South Carolina, Spartanburg Regional Healthcare System and Clemson are coordinating health science research in 11 Centers of Economic Excellence ranging

from brain imaging to childhood aerotherapeutics to stroke, cancer and cardiovascular disease with a funding base that will exceed \$80 million over the next decade.

The Centers of Economic Excellence are tied to the Endowed Chairs Program, another piece of legislation, which is funded by \$180 million from the SC Education Lottery and matching funds from private donors. According to Mahoney, since the program began in 2002, 37 newly endowed chairs are in place at the state's major universities in areas such as advanced materials, alternative energy, nano delivery systems and diagnostics and therapeutics.

State legislation also provided mandates for laboratory and wet lab expansion and addressed technology commercialization, SCRA's expertise. As a non-stock, tax-exempt corporation chartered by the state of South Carolina in 1983, SCRA booked over \$110 million in revenue for delivering applied research for the federal government and private corporations this year. They also developed the Trident Research Center in Charleston, Carolina Research Park in Columbia and Clemson Research Park near the university's campus. Their newest venture is SC Launch, another program inspired by legislation.

"In 29 months of operation of SC Launch, we've helped 104 knowledge economy companies in the state with seed capital and services. Eighty-three received funding from \$1,500 invention prizes to \$200,000 in seed capital; 41 have licensed intellectual property from the universities and 16 captured over \$50 million in add-on capital investment," Mahoney said. "If we invest in basic science, intellectual capital and facilitate entrepreneurship, we're going to have winners. We just have to stick with it." **i**



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