

Drug Discovery Building

MUSC will soon break ground on a building where researchers can expand their work in the development, patenting, and licensing of new drugs.

Researchers usually work in certain disciplines such as pharmacology or biomedicine. However, under the new system, researchers on interdisciplinary teams will work toward developing drugs to combat specific diseases. MUSC is especially interested in drugs for cancer, cardiovascular diseases and neurological problems. The Drug Discovery Building, dedicated to drug development, will promote that kind of collaboration.

The 114,000 ft² building will be comprised of state-of-the-art laboratory and biotech start-up space. The first floor will house the NMR Core, the Pharmacy Teaching laboratories and an auditorium. The second floor will include Structural Biology laboratories and space for biotech start-up companies. Levels three and four will house 62,000 ft² of cancer research laboratories. Level five will be home to Advanced Cellular Technologies and Organ Failure Research laboratories. The sixth floor will hold the Small Animal Imaging Shared Resource and the animal facility. The building is scheduled to be completed in 2010.

Professors [Kenneth Tew](#) and [Chuck Smith](#) are researchers currently working in [MUSC's Hollings Cancer Center](#) developing cancer drugs and are funded in part through the South Carolina Research Centers of Economic Excellence Act, also known as the Endowed Chairs program. Both Dr. Tew and Dr. Smith will move to the Drug Discovery Building when it is completed.

Dr. Smith says that MUSC does not want to become a drug company, but it does want scientific discoveries to be further developed at the University.

South Carolina Bioengineering Alliance (SCBA)

Bioengineering applies principles and methods from the physical, engineering, computational, behavioral, and social sciences to the life sciences in order to enable understanding of fundamental biological and disease processes and to improve medical care.

[The SCBA](#) is a structured effort among Clemson University, MUSC and the University of South Carolina (USC) aimed at promoting and strengthening bioengineering across the state. The Alliance is led by [Dr. Richard Swaja](#), the SCBA Director, and the Board of Directors which consists of the Vice Presidents for research at the participating universities.

MUSC, Clemson, and USC have jointly committed to the construction of a \$60 million, 100,000 square foot Bioengineering Facility on the MUSC campus. Officials hope to begin construction on the bioengineering building in 2009. The Alliance is currently administered by the Department of Bioengineering at Clemson University.

Cutting edge interdisciplinary research conducted by the faculty includes emerging niche sub-disciplines in bioengineering such as:

- *Biomaterial Design and Testing*
- *Nanotechnology*
- *Matrix and Tissue Engineering*
- *Stem Cell Engineering and Regenerative Medicine*
- *Bio-transport and Constitutive Modeling*
- *Bioimaging*
- *Orthopedic, Dental, and Maxillo-facial Reconstruction*

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