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FINAL EDITION

The Greenville News

GreenvilleOnline.com

A GANNETT COMPANY



Greenville,
South Carolina

SATURDAY, DECEMBER 10, 2011

Clemson brings doctors, faculty together



Martine LaBerge, chair of Clemson's bioengineering department, right, works with doctoral candidate, Estefi Alvarez, center, and Assistant Professor Melinda Harman in the lab at the Biomedical Engineering Innovation Campus. KEN OSBURN/STAFF

Research center seen as idea lab

University hopes collaboration yields new technologies in medical field

By Rudolph Bell

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If you've designed a new kind of surgical implant and you want to test it out in a cadaver, you can now do it in Greenville.

That's one of the capabilities at the Clemson University Biomedical Engineering Innovation Campus, which opened Friday at the Greenville Hospital System's Patewood campus.

The center, funded by state government and bio-

medical companies, is designed to bring Clemson researchers and students together with physicians and entrepreneurs to develop new medical devices and technologies for use in fields such as orthopedics and vascular surgery.

Along the way, Clemson hopes to teach students and train health care workers and make patients' lives easier.

Located in about 30,000 square feet of space on the

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fourth floor of an office building, the center includes labs for regenerative medicine, orthopedic research, materials characterization and ultrasound imaging.

There's also a morgue for cadaver storage and an operating room where medical device companies can train health-care workers on how to implant their latest products.

Research activities include designing biomaterials and sensors and studying failed surgical implants.

The center also includes the country's first program to train people to recycle biomedical devices, a way of cutting health-care costs, said Martine LaBerge, head of Clemson's bioengineering department.

There's also space for start-up companies that may spin out of the research or come to the center to be close to the research, though no companies have occupied any of the space yet, LaBerge said.

Clemson hopes the center will help generate lucrative inventions like a polymer coating for surgical implants that came out of its bioengineering department in the 1980s.

The invention by Joon B. Park, a Clemson bioengineering professor at the time, made it easier for the human body to receive implants such as hip or knee implants.

A company called Zimmer bought the rights to the technology, and between 1981 and 2002, it paid nearly \$30 million in royalties, though the product was manufactured out of state. Half of the royalties went to Clemson and the rest to Park.

Lisa Waples, a Wisconsin consultant hired to help Clemson raise the national ranking of its bioengineering department from 23rd to the top 10, said it's very realistic to expect the new center to generate marketable new technology and spinoff companies.

Waples, a former director for corporate relations in biomedical engineering at Marquette University, said the Clemson center compares "very, very favorably" with biomedical programs she's seen at universities around the coun-

try.

Waples said Stanford University in California is the only other program she knows of that brings doctors and researchers together in the same building to collaborate for innovation.

LaBerge said the state of South Carolina provided \$7 million for the center, and five companies provided funding and/or equipment. She identified the companies as Smith & Nephew, Ziehm Imaging Group, Agfa Healthcare, Virturad Inc. and Phillips Medical Systems.

In addition, Clemson is part of a statewide consortium created to foster biomedical research with the help of Stryker Corp., a major medical device company.

As part of the consortium, Stryker has agreed to rebate part of its product sales to six hospitals around the state. The hospitals will use the resulting savings to fund biomedical research by Clemson, the University of South Carolina and the Medical University of South Carolina.

Stryker gets first right of refusal to market any technology that comes out of the program, according to Clemson.