



LEGISLATIVE UPDATE



A Briefing for Faculty & Staff of the University System of Georgia No. 7, February 19, 2007

“Creating a More Educated Georgia”

Legislative Presentation on University-Led Research in Georgia is a First

The presidents of the University System of Georgia’s four research universities and the president and chief executive officer of the Georgia Research Alliance united on Feb. 12 to inform a group of state legislators how the cutting-edge research being done within the USG is improving lives and fueling growth in Georgia.

Invited to address the Higher Education Subcommittee of the House Appropriations Committee in what the subcommittee’s chair, Rep. Bob Smith, hopes to make an annual event were Dr. Michael Adams of the

University of Georgia, Dr. Wayne Clough of *Georgia Tech*, Dr. Carl Patton of *Georgia State University*, Dr. Daniel Rahn of the *Medical College of Georgia* and Dr. Michael Cassidy of the Georgia Research Alliance.

In addition to the Higher Education Appropriations Subcommittee, members of the House Higher Education Committee and the chairs of several important House and Senate committees attended the 75-minute hearing presided over by Rep. Bill Hembree.

The legislators learned about the



Rep. Bill Hembree, who presided over the hearing, is flanked here by *Georgia Tech* President Wayne Clough (left) and Rep. Bob Smith (right), who conceived the event.

Photo courtesy of Georgia State University

groundbreaking work on emerging infectious diseases like bird flu and West Nile virus being done at *UGA*, cancer and diabetes at *MCG*, nanotechnology and nano-medicine at *Georgia Tech* and biotechnology and public health at *Georgia State*.

Georgia Research Alliance

“This is where it’s all happening,” said Cassidy, who described the Georgia Research Alliance (GRA) as a public/private partnership that assists Georgia’s universities in:

- ◆ recruiting world-class scientists who generate hundreds of millions of dollars in outside investment;
- ◆ brokering partnerships with industry to improve competitiveness and grow jobs in Georgia; and
- ◆ launching companies that create jobs and bring products to market.

“These four research institutions are tops in many different fields of research, and this work is having a tremendous impact on Georgia’s economy,” Cassidy said

See “Research,” Page 2 ...

Regents Welcomed Under Gold Dome

Members of the Board of Regents were recognized on the floor of both the Senate and the House of Representatives during time spent at the state Capitol on Feb. 14 for visits and meetings with elected officials.

Coming Up

The General Assembly will meet three days this week – Tuesday, Wednesday and Thursday. Next Tuesday, Feb. 27, will be the 25th legislative day of the 40-day session. 🏛️

Research

Continued from Page 1...

As an example, he cited GRA Eminent Scholar **Dr. Jin-Xiong She**, who is leading the world's largest, most comprehensive study of childhood diabetes as director of *MCG's* Center for Biotechnology and Genomic Medicine. She brought 20 scientists and more than \$10 million in federal funds with him to Georgia and continues to generate \$4-8 million per year in grants. His studies include worldwide screening programs to find the combination of genetics and environmental triggers that result in type 1 diabetes.

Cassidy also pointed out that **Dr. Cliff Baile** has been instrumen-

tal in launching seven technology-based companies to date since the internationally known scientist was recruited as *UGA's* GRA Eminent Scholar in Agricultural Biotechnology in 1995 and **Dr. John Copeland** at *Georgia Tech*, GRA's first eminent scholar, has invented a software product, *StealthWatch*, that is a market leader in detecting a new form of cyber-crime and led to the launch of *Lancope*, a Georgia company that employs more than 60 people.

"Today, the overwhelming majority of companies in the business incubators at *Georgia Tech*, the *University of Georgia*, *Georgia State* and the *Medical College of Georgia* are directly related to research

break-throughs in those universities' laboratories," Cassidy told lawmakers. He noted that Georgia now ranks 7th in the nation in the number of biotech companies and this ranking, along with the state's heavy involve-

ment in cutting-edge broadband telecommunications, is due to research programs at Georgia universities.

"Scientific revolutions are occurring on the campuses and in the laboratories of Georgia's research universities every day," Cassidy said.

Georgia State University

Patton told lawmakers that *Georgia State* has researchers fighting germ warfare in some of the most high-tech, high-security labs in the country, including a Level 4 Bio-Safety lab headed by GRA Eminent Scholar



Dr. Michael Cassidy delivers his presentation on the Georgia Research Alliance.

Dr. Julia Hilliard, the world's foremost expert on Herpes B. The BSL-4 lab – a facility equipped with glove boxes for bio-containment of deadly viruses such as HIV and West Nile – is one of only two in the country located at a university.

Georgia State's BSL-4 Lab now acts as a National Institutes of Health National Resource Center and is considered one of the world's front-line diagnostic labs.

Patton noted that the rise in terrorism and the potential for biological attack has height-

See "Research," Page 3 ...



USG Presidents (left to right) **Carl Patton**, **Michael Adams** and **Wayne Clough** chat with **Rep. DuBose Porter** (right) and other legislators following the hearing.

Research

Continued from Page 2...

ened the U.S. military’s desire to be prepared for such an attack.

In response, the Viral Immunology Center at **Georgia State University** is designing a detection field device to capture chemical or biological agents to be screened for deadly pathogens like Ebola and anthrax. It also will analyze the collected materials and transmit the data to a lab for real-time analysis, Patton said.

Collaboration with researchers at other institutions is an important part of the System’s overall research efforts. One example is the Center for Behavioral Neuroscience

which is housed at **Georgia State**.

More than 100 researchers from eight Atlanta institutions now work to conduct groundbreaking research unlocking and decoding medical, chemical and behavioral secrets of the human brain. The center is supported by researchers and laboratories from area universities, including **Georgia Tech**, as well as dozens of faculty from **Georgia State**.

Patton also thanked the legislators for funding the new Science Teaching Laboratory Building. “This new facility will enable us to undertake even more research that will improve the lives of Georgians,” Patton said.

University of Georgia

Adams’ presentation highlighted **UGA’s** research in three areas: cancer, infectious diseases, and bio-energy and alternative fuels. He termed the Complex Carbohydrate Research Center (CCRC) “one of our greatest research successes, noting that **UGA** lured the CCRC and its team of 18 scientists from the University of Colorado in 1985 and grew it into a 140,000 square-foot facility that attracts approximately \$10 million in external research funding annually. Seventeen research groups and dozens of graduate and undergraduate students at the center engage in cutting-edge research into the physiology and developmental/molecular biology of complex carbohydrates.

The **UGA** Cancer Center is also located in this facility because of the important role carbohydrates play in cancer, Adams said, urging continued support from lawmakers for the center’s work.

Turning to research on infectious diseases, Adams told the legislators that “Virtually every



Dr. Carl Patton describes **Georgia State’s** Viral Immunology Center.

Photo courtesy of Georgia State University

case of bird flu in the Southeast is sent to us for diagnosis and study, and when fully operational in the very near future, the Animal Health Research Center will be one of the largest non-federal bio-containment buildings for animal disease research in the world. It will enable us to respond to animal-borne diseases in hosts from chickens through cattle with the potential to infect humans.”

UGA is also a leader in the field of alternative fuels and bio-energy, partnering with the Department of Energy to establish one of two national Bio-Energy Science Centers. The center will be located

See “Research,” Page 4 ...



Dr. Michael Adams tells legislators about the **University of Georgia’s** cutting-edge research on infectious diseases such as bird flu, work that is helping to protect Georgia’s poultry industry.

Research

Continued from Page 3...

at the Oak Ridge National Laboratory, Adams said, but *UGA* will be a critical partner, receiving \$20 million over five years. Success with this center will help ensure Georgia's leadership in creating sustainable alternative fuels that reduce America's dependence on petroleum-based products, he noted.

Medical College of Georgia

MCG focuses its research in five thematic areas that reflect the leading causes of premature mortality and disability in Georgia: neurological diseases, cancer, infection/inflammation, cardiovascular disease and obesity/diabetes,

Rahn said. Thematic growth has helped fuel tremendous increases in research funding in the last five years, including a 220 percent growth in cancer funding, a 226 percent growth in cardiovascular disease funding and a 986 percent increase in diabetes funding. Clinical and translational science, which speeds the movement of scientific discoveries to patients, have become overriding themes for all research activity.

In March, *MCG* opened its \$54 million Cancer Research, which is the hub for expanding works in cancer research and treatment as well as the education of future scientists and practitioners, Rahn said. Major areas of research and treatment include molecular oncology, prevention and control, immunology/immunotherapy and developmental therapeutics. A clinical trials unit, enabling the study of new therapies as they first move from the lab to patients, is operational.

In the area of neurological disease, a Web-based patient examination system developed by the *Medical College of Georgia*

Neuroscience Center is enabling *MCG* to provide around-the-clock assessment and treatment of stroke patients in many areas of rural Georgia. Despite the fact that Georgia is in country's stroke belt, most rural communities don't have specialists to treat this potentially debilitating disease.

Studies have shown this technology, dubbed REACH, enables rural patients to get care that is as good as the care in larger cities. *MCG* is exploring its use in treating other medical conditions and other states are using it as well.

Georgia Institute of Technology

Clough told lawmakers that *Georgia Tech*, with its 18 National Centers of Excellence and three National Institutes of Health Centers of Excellence in nano-medicine, adds \$4 billion annually to the state's economy.

Tech spun off 47 start-up companies during the period 2000-2005, Clough said, and is a global



Dr. Dan Rahn talks about biomedical research at the *Medical College of Georgia*.



Dr. Wayne Clough tells lawmakers about the *Georgia Institute of Technology's* 18 National Centers of Excellence.

leader in biotechnology transfer. In 2005, *Tech* was awarded 43 patents, placing the university third in Georgia behind only GE Energy and BellSouth.

Tech also ranks No. 2 in the nation in engineering research and development and No. 3 in the nation in terms of having its nanotechnology experts cited in peer-reviewed publications, Clough said.

Tech's annual research expenditures have doubled during the past decade, he noted. In 2006, the university received 2,317 awards totaling almost \$450 million, up from 1,884 awards in 2001 totaling \$300 million. 🏠