

USC experiments to fly with space shuttle

ERIN GALLOWAY
ALLISON WILLIAMS News Editors

Two USC experiments will be part of NASA's Endeavour Space Shuttle mission, which is scheduled for a Sept. 2 launch at Cape Canaveral, Fla.

This will be the second shuttle project for five pharmacy students who are developing new drugs to treat cancer, and for School of Medicine researchers studying heart muscle cells.

In March, pharmacy professor Edward Piepmeier and the students sent an experiment on the Endeavour to study the effect of an anti-cancer drug on leukemia cells in zero gravity. Piepmeier has analyzed the cancer cells from the March experiment and, after comparing them with cells treated on Earth, noticed a difference in the way that drugs are distributed within cells.

"We received good data from our first experiment. We have some exciting information on how drugs are distributed in cells, both in gravity and in low gravity conditions. This is important to understanding drug resistance," Piepmeier said.

On the shuttle, USC College of Pharmacy researchers will repeat the first experiment with Adriamycin, a drug used to treat breast cancer and leukemia.

David Simpson, a research assistant professor, said the long-term goal of the School of Medicine's project is to address the problem that heart muscle cells do not divide. A heart attack, for example, causes heart muscle cells to die, leaving a weakened area of the heart.

"If this project is successful, we can progress towards cloning human cells," said Louis Terracio, developmental biology and anatomy professor in the School of Medicine.

Terracio said cells will only grow one layer thick on Earth, but while in reduced-gravity in space, the



Student researchers working on the project include, from left, Elizabeth Mead, Les Brewer, Ron Stroman and Steve Aiken. This is the second experiment this year that the College of Pharmacy has had on the shuttle.

cells will hopefully produce multiple layers. Researchers hope to recreate the reduced-gravity conditions in the uterus which help a fetus' cells grow.

If researchers are successful in cloning the cells, the need for a full heart transplant would be eliminated, according to Terracio. Instead, damaged areas of the heart would be replaced by the cloned cells.

Torracio said that the NASA bioreactor used in projects similar to this one is not compatible with the USC project. He said he hopes the success of this project will convince NASA engineers to change their bioreactor.

Students involved are undergraduate pharmacy students Steve Aiken, Les Brewer and Elizabeth Mead,

and graduate students Ronald Stroman and Andrew Larkin. They will arrive in Cape Canaveral two days before the launch.

The students are responsible for transporting and packing the cells. Packing the cells takes about 12 hours and must be done 16 hours before the shuttle takes off, Mead said.

"It's been a lot of fun to go to Florida and see a space shuttle launch. It's something I never thought I'd get to do. I always dreamed of working for NASA," Mead said.

Marketing and Media Relations contributed to this story.

Export center opens its doors to USC, state

ALLISON WILLIAMS News Editor

A vision that the USC provost, S.C. governor and many others once shared is becoming a reality through a new university center.

The Center for Export Development, officially opened in May, will provide a resource for overseas exporting for students and faculty, as well as small- to medium-size S. C. companies.

"The timing seemed to work out rather well. It coincided with Gov. Beasley's emphasis on exporting and with the university's goal to become a greater player in economic development in the state," said Lee MacLwinen, managing director for the center.

The center, part of USC's Institute of Public Affairs, plans to work with companies in preparing a pre-export assessment and market analysis, as well as help in getting a South Carolina product into a foreign country. The center hopes to help students and faculty by serving as a resource as well as utilizing various departments on campus. Students and faculty will be able to have access to what MacLwinen hopes is virtually a World Trade Center office.

"Our goal is to duplicate resources of a World Trade Center, to serve as a functioning World Trade Center affiliate office," MacLwinen said.

While other agencies already provide some of these services, MacLwinen said he hopes the center will complement these agencies as well as taking the process of developing business opportunities in other countries a step further for companies in the state.

"The companies were left to do a lot on their own. We'll take you from where those agencies drop off. We'll be glad to sit down and put together a feasibility study and an extensive market study. Companies have said they would like somebody to help them," MacLwinen said.

MacLwinen, along with two other staff members, are contacting state companies, but are also currently planning a project with the University of Los Andes in Bogota, Colombia.

The center has not only caught the eye of foreign countries, it has also received attention from Northwestern University, who is interested in establishing a similar program, and the Center for International Business Education and the Small Business Exporters Association, to set up a national export certification program. If such a program is started, it would be the first of its kind in the nation, MacLwinen said.

One of the reasons the center is attracting so much attention may be because the project is a unique combination of public agencies and schools and a private for-profit organization. The center is a joint venture between USC, the World Trade Center/Greenville-Spartanburg, Clemson, Greenville Tech and Jobs Economic Development Authority (JEDA). World Trade Center/Greenville-Spartanburg's director K. Wayne Trotter will also be at USC's center two days a week.

"Our plan is to be here for years and years and years," MacLwinen said.



MACILWINEN



TROTTER

BIGHAM continued from page 1

Johns is working on a new voting system, where students could vote for executive officers by telephone, according to Bigham. She said Johns is also looking at the spending limits set for candidates to see if the limit should be increased or even eliminated. Spending limits are keep possible candidates from thinking they would not have the money to run a campaign.

"July's main focus is to get people out and voting," Bigham said. "In the past the focus has been on infractions."

One major project SG is working on right now is a reunion of past SG officers and members. The event is planned for the weekend of the Kent State football game.

"We've sent out 1,700 letters," Bigham said.

She said tickets are \$25 and the money will be placed in the scholarship fund set up last spring by then-SG President Brian Comer. Bigham said \$7,000 has already been donated to the fund and the goal is \$50,000.

"We hope to be able to fund 10 to 15 scholarships a year (once the fund is in place)," she said.

A second project SG is currently plan-

ning is a drawing for a free parking space. Tickets will be \$1 and one parking space will be given away.

"If you win," Bigham said. "SG will reimburse you for your parking space," if you have already paid for a garage space.

Bigham said she is also excited about Freshman Council this year. Casey Bonds and Wesley Walker will be heading up

the council this year and are planning a fall project for the group of freshmen.

The project, a guide for freshmen, will be similar to one done at Clemson, which includes such entries as how to get to the mountains and the beach.

Applications for Freshman Council are available in the SG office on the first floor of the Russell House.

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