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SCSU nets more than \$325,000 with 2 grants

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St. Cloud State University received more than \$325,000 to boost ongoing research projects in its chemistry department.

Awarded through two grants from the National Science Foundation's major research instrumentation program, St. Cloud State has received more than \$930,000 from the National Science Foundation this year. Six **faculty** members in the chemistry department are involved in the projects **funded** by the grants.

"We have a very active research department," Lakshmaiah Sreerama, associate professor of chemistry said.

Almost \$158,000 will buy a matrix-assisted laser **desorption/ionization** mass spectrometer, **which** allows researchers to determine the size and structure of large molecules such as proteins and DNA. Sreerama and his colleagues then will be able to **identify** molecules in diseased cells and normal cells, and compare them.

"It can help us analyze drug resistance in cancer cells," **Sreerama** said. "This will lead to the development of more effective anti-tumor drugs."

The rest of the money, about \$167,900, will be used to buy a **Varian** Eclipse spectrofluorimeter.

It also will **pay** for nine to 12 months of work **by faculty** and students to produce add-on modules to expand the Eclipse's power and versatility. Among other things, the Eclipse will be used to detect environmental pollutants in soil and water samples and assess food and supplements for their ability to prevent or cause cancer.

Acquiring both instruments, which are each smaller than a 6-foot-by-3-foot bench, also will benefit others, Sreerama said.

The College of St. Benedict and St. John's University have expressed

interest in using the MALDI. St. Cloud State's laboratories also are used for events such as workshops for local school teachers.

"These instruments will provide us the basic infrastructure needed to conduct cutting-edge research," Sreerama said. "It will allow us to train our students on par with other large universities in the country."