



## SCSU awarded \$325,000 by National Science Foundation

The St. Cloud State University Chemistry Department has received two grants totaling more than \$325,000 from the National Science Foundation through its Major Research Instrumentation (MRI) program. The program encourages U.S. academic institutions to integrate research and education in science, mathematics, and engineering by providing funds for state-of-the-art research instrumentation.

"Using the new equipment in research and classroom activities will keep SCSU faculty and students on top of modern chemical instrumentation and help prepare students for industry and/or graduate school," said Michael Dvorak, Assistant Professor of Chemistry. More than 30 chemistry students participate in faculty-student collaborative research projects each semester.

Professors Michael Jeannot, Lakshmaiah Sreerama, Mohammad Mahroof-Tahir, Donald Neu, and Nathan Winter received \$157,750 to purchase a matrix-assisted laser desorption/ionization (MALDI) mass spectrometer, which gives information about the size and structure of large molecules such as proteins, DNA, and synthetic polymers (plastics, adhesives, etc.).

Professors Dvorak, Daniel Gregory, Jeannot, and Sreerama received \$167,900 to acquire a Varian Eclipse spectrofluorimeter and develop two add-on hardware modules to expand the Eclipse's power and technical versatility. During the next 9 to 12 months, faculty and students will produce these modules in collaboration with Dakota Technologies Inc. (DTI), a leader in development of novel, pulsed laser instrumentation for environmental and health related research.

In addition to SCSU faculty and students, the equipment will benefit others in the region. Scientists at the College of St. Benedict and Saint John's University have already expressed interest in using the MALDI mass spectrometer to pursue their research. Local high school teachers who participate in the SCSU Chemistry Department's summer workshops will update their skills and knowledge through hands-on experience with the new instrumentation. And chemistry classes from local high schools are frequently invited to conduct experiments in the Chemistry Department's laboratories.