

Competitive Grants



Investigator: *Linda Lyons, University College Academic Advisor*
Project Title: *Peer Mentor Program*

You're a second-semester freshman with not-so-stellar grades, ambivalent career ambitions, and an on-campus job that you hate. Who do you turn to for advice?

- A. Your equally unmotivated roommate.
- B. A faculty advisor whom you've met with twice but wouldn't recognize if you bumped into her on the Quad.
- C. An upperclassman with a sympathetic ear and a can-do spirit.

Guessing that most students would probably choose C, University College Academic Advisor Linda Lyons is piloting a Peer Mentor Program this semester to connect discouraged—or perhaps just confused—freshmen and sophomores with students who can help.

"The \$4,085 URI Foundation grant will eventually furnish a permanent space with a 'living room atmosphere' so that peer mentors can offer the support and referrals to campus offices or services that other students may need," Lyons said. This semester, the Peer Mentor Program will be temporarily set up in Roosevelt Hall's Great Room.

The peer mentors won't provide academic advising, but they will provide encouragement over the phone or in person. URI officials are hoping that the program, along with other University College initiatives, will help boost the student retention rate by two percent each year.

"The connectedness is really what we're focusing in on," Lyons says of the Peer Mentor Program's mission. "This is student to student. They'll find out the scoop from somebody who's been through it before."



Investigator: *Keykavous Parang, Assistant Professor, Pharm. D.*
Project Title: *Molecular Modeling Laboratory Initiative*

These days, drug design is a little bit like a paint-by-number project. Thanks to a sophisticated computer program, one can peer into the molecular structure of a protein and view spiraling alpha helix strands in blue and brown. Rotate the model with the click of a mouse, and tiny red and gray dots appear, pinpointing where a drug—perhaps for depression, HIV, or heart disease—will do battle at the molecular level.

Keykavous Parang, assistant professor of biomedical sciences, has received \$5,950 to bring this computer-modeling program to campus this semester. With the new software, undergraduate and graduate pharmacy students will be able to do the kind of detective work Parang says is critical to understanding drug interactions and effective drug design.

Instead of relying on "live" experiments to synthesize hundreds of thousands of compounds, students can manipulate a drug synthesis on computer. Years of research, compressed into protein data banks, are now available at the click of a mouse, Parang says.

In the past, pharmaceutical researchers learned about drug interactions the hard way. "We told them to memorize the stuff, but not to see it," said Parang. "Now, this gives them visualization of how the drugs are designed."



Investigator: *Scott McWilliams, Assistant Professor of Natural Resources Science*
Project Title: *Undergraduate Field Research in Wildlife Management and Ecology*

The students were stumped. Exactly what sort of predators stole off with the eggs they were studying? The wildlife management and ecology students would set out plastic eggs to see if they could discern the teeth marks of a greedy raccoon, or soot-covered plates to detect a fox's paw prints. The mystery usually remained unsolved.

This semester, thanks to a \$4,850 URI Foundation grant, Dr. Scott McWilliams, assistant professor of natural resources science, can give them an answer. The grant will pay for an infrared camera system that will take a picture of predators being studied by students. Other equipment, including 200 woven birds' nests, a recorder to capture the chorus of frogs and toads, and a telescoping pole to catch the slippery amphibians, will also be purchased.

The equipment will be used by undergraduates enrolled in McWilliams' Wildlife Management Techniques course, as well as by students engaging in independent research projects. Ultimately, McWilliams said that the goal is for students to design experiments and conduct research. "They're learning how to ask questions that are relevant."



Investigator: *Cheryl A. Wilga, Assistant Professor of Biological Sciences*
Project Title: *Comparative Anatomy Web Manual*

Aspiring doctors and veterinarians at URI are accustomed to dissecting fish, salamanders, and cats. From Cheryl Wilga's point of view, there are many more creatures in the animal kingdom worth peering inside.

The assistant professor of biological sciences won a \$4,813 URI Foundation grant to buy a broad range of species—from rats to fetal pigs to snakes—preserved in clear liquid so that students can compare their vertebrate anatomy in the second-year biology class she teaches.

The preserved specimens, plastic models, and various skeletons will also pull double duty. Photographs will be taken and entered into a web-based program so students can study them between their weekly labs. The grant will pay a work-study student to take the pictures with a digital camera and incorporate them into an on-line lab manual. "You can't turn it around or lift something up, but if the picture is clear, it will show everything that's necessary," Wilga said.

"We'll have birds, snakes, turtles, frogs—things other than the norm. It gives students a better perspective," she said.

By Chris Poon