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ERI faculty teach kids scientific methods

By **Jeff Samoray**, OU Web Writer

Students from the Clarkston Foundation Summer Science Academy had a first-hand glimpse of the work of a vision scientist when faculty, staff and students from Oakland University's **Eye Research Institute** (ERI) hosted academy students and teachers in an informative tour of its laboratories June 18. Ten 15-minute presentations – many of them hands-on – were given to the 19 students and six teachers from the academy.

"We want to get kids interested in science by showing them just what a scientist does on a daily basis," said Professor of Biomedical Sciences and ERI Interim Director Frank Giblin. "We highlighted the techniques scientists use in studying the tissues of the eye and the causes of various eye diseases. We also want to impart some knowledge on how the eye works and show them we're having fun and enjoy this work as well."

Among the activities students participated in were tissue sectioning a rat retina and examining those tissues under a digital microscope, led by Assistant Professor of Biomedical Sciences Shraavan Chintala; completing a color vision test and learning about light- and dark-adapted retinas, led by Professor of Biomedical Sciences Barry Winkler; and how to use a pipet to add microliters of a solution to a sample for analysis, led by undergraduate biology major Sara Pellicca. Another highlight was seeing the ERI's new \$266,000 electron microscope, which is capable of magnifying objects up to 1 million times.

"The students learned a lot about the research end of science," said academy teacher Darlene Roche. "They also learned the importance of communication skills in speaking and writing about science. The setup and presentation format for this age level was perfect. The students had just enough time to see demonstrations; do some higher-level, hands-on activities; and ask questions."

Students in the academy all demonstrate a high interest in science and pursuing a career in a scientific field. The week-long academy, now in its first year, teaches students about careers in science and the values of problem solving and working collaboratively. Entry into the academy is rigorous –students must fill out two applications and write an essay about their interests in science and its relation to professionalism.

Kara Grappin, an academy student entering the eighth grade, said she wants to be either a marine biologist or a paramedic.

"The visit was really fun," Grappin said. "I really liked slicing the rat retina. All medical things interest me a lot. The scientists do a lot of cool stuff at the institute. I think it would be really cool and fun to work here."

The Eye Research Institute is a unique center of ophthalmic research. Its primary mandate is to conduct basic research into the underlying causes of eye diseases that result in blindness and loss of vision. In its 35 years in vision research, the ERI has received over \$40 million from external funding sources, mainly the National Eye Institute.

The institute has full-time faculty members, research associates, post-doctoral fellows, affiliated clinical faculty, support staff and students. OU undergraduate science majors have the opportunity to work side-by-side with ERI faculty. Students experience not only the rigors of scientific methods but also the rewards of attacking problems associated with human health and disease.

In addition to conducting vision research at OU, the ERI is formally associated with **William Beaumont Hospital's Department of Ophthalmology**.

To learn more about ERI faculty, events, and student research opportunities, visit the **Eye Research Institute** Web site or contact them at (248) 370-2390.

SUMMARY

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