

Tuesday, February 16, 2010

OU faculty pursue promising research with support from NIH

Press Release

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OU faculty pursue promising research initiatives through generous support from NIH

Rochester, Mich. – A total of 10 Oakland University researchers have won more than \$2.7 million in National Institutes of Health awards for research they're conducting in a variety of scientific disciplines.

The funding, made available through the American Recovery and Reinvestment Act of 2009, is supporting several projects in Oakland's highly esteemed Eye Research Institute, as well as queries into theoretical physics and quantitative biology.

A more than \$722,000 award granted to Dr. Bradley Roth, a professor of physics and director of OU's Center for Biomedical Research, for example, will help establish the Core Center for Quantitative Biology at Oakland. At the center, researchers will advance work in a growing field that merges the disciplines of mathematics, biology and engineering.

"This is a great opportunity for us," Dr. Roth said referring to researchers and the university community as a whole. "I think it's going to mean a lot for OU students, because students in these fields will be better able to see how all of these disciplines are coming together."

Dr. Roth also has received grant funding for his own research into the effects that magnetic fields have on electrical currents in the body. Broader understanding established through this work could ultimately lead to technologies that enhance medical imaging processes and related diagnostics.

Dr. Barry Winkler, a professor of biomedical sciences and a nearly 40-year member of the Eye Research Institute, received more than \$709,000 to build on his groundbreaking discovery that photoreceptor cells in the eye lack a common anti-oxidant that protects other cells from oxidation damage.

"What I love about the work I've done all these years is that you never know when you will hit upon a very exciting idea," Dr. Winkler said. "This is a very exciting idea."

The work could eventually lead to treatment of widely occurring problems of the retina, including diseases in which oxidation is suggested to play a role. Among these is age-related macular degeneration.

Dr. Shravan Chintala, an associate professor of biomedical sciences and member of the Eye Research Institute, has received a \$740,000 grant to support his investigation into how elevated pressure in the eye leads to damage of certain retinal cells.

Insights he's gained through his work and ongoing study may lead the way to a pharmacological means of averting this damage, and hence help prevent blindness resulting from glaucoma. This is a significant prospect given that more than 60 million people suffer the disease worldwide.

"I have intriguing ideas, but I need to test them and this grant funding allows me to do that," Chintala said. "We're aiming for prevention, that is our ultimate goal."

Other OU researchers receiving grant funding include Dr. Frank Giblin, Dr. Kenneth Milton and Dr. Andrew Goldberg of the Eye Research Institute; Dr. Zijuan Liu and Dr. Douglas Wendell of the Department of Biological Sciences; Dr. Xiangqun Zeng of the Department of Chemistry; and Dr. Dawn Pickard, associate dean of the School of Education and Human Services.

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SUMMARY

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