ERI ANNOUNCEMENTS & COMING EVENTS

Welcoming New Members
During Fall Semester 2010 the Eye Research Institute welcomed the following ERI members, fostering new connections across the UW-Madison campus and beyond:

Members: Carol Hirschmugl, PhD (Physics; UW-Milwaukee)  
          Yijun Huang, PhD (Ophthalmology and Visual Sciences)  
          Dolores Severson, PhD (School of Nursing)  
          Lalita Subramaniam, PhD (Ophthalmology and Visual Sciences)  
          Matthew Weed, PhD (Interim Associate Director, Wisconsin Institute for Discovery)

Associate Members: Suzanne Peyer, PhD (Medical Microbiology and Immunology)  
                   H. Adam Steinberg, DBA (ArtforScience, community)

ERI Seminar Noon to 1:00pm, January 11
Dana Vaughan, PhD (Biology & Microbiology, UW-Oshkosh) uses the 13-lined ground squirrel to explore retinal remodeling;  
Margaret McFall-Ngai, PhD (Medical Microbiology & Immunology) studies a squid/bacterium symbiosis to discern how tissues evolved to interact with light. They will share insights as they speak about
Two unique animal model systems: contributions to vision knowledge.
Bock Labs Penthouse, 9th floor
RSVP for pizza lunch by 3:00pm Monday, January 10: gmstirr@wisc.edu

ERI Seminar Noon to 1:00pm, February 8
Gordana Raca, MD, PhD, FACMG (Pathology & Laboratory Medicine) and D.J. Sidjanin, PhD (Cell Biology, Neurobiology & Anatomy; Medical College of Wisconsin) will share their
Genetic approaches: understanding congenital eye anomalies and cataract.
Wisconsin Institutes of Medical Research (WIMR) Room 7001A
RSVP for pizza lunch by 3:00pm on Monday, February 7: gmstirr@wisc.edu

Advancing Poster Presentation Skills, an ERI lecture on February 18, 3:00pm
H. Adam Steinberg, former Artist & Scientist at the Department of Biochemistry, will share his 20 years of experience with effective ways to present scientific data in a poster. Attend this valuable seminar to learn the importance of clear, succinct communication, effective layout, and how to get noticed! This opportunity is for graduate students and post-docs in ERI member lab groups, as well as for ERI member faculty and staff.
Presenting Scientific Data: Posters
Friday, February 18, 3:00pm to 4:00pm
Biochemistry Addition Room 175
(First-come, first-served; room seats 50)

Building Graduate Student Opportunity: The David G. Walsh Research Fellowship
In recognition of ERI Advisory Board leadership and of vision research advocacy by UW Regent David G. Walsh, JD, ERI Director Dr. Daniel Albert recently announced that the ERI is establishing the David G. Walsh Research Fellowship for graduate research related to retina. Intended to help nurture the next generation of vision scientists, the Walsh Fellowship will initially provide funds for a graduate student to attend a research conference to present work and to advance educational and professional development opportunities. Over time, intent is to grow the Fellowship to provide a full stipend to support a selected Walsh Fellow as he/she progresses throughout their research program. In Spring Semester of 2011, one graduate student will be selected to receive a $1,000 travel award to attend and present work at a professional conference/symposium. Application information will be available in late January.
Healthy Lifestyle Factors Reduce Risk for Age-Related Macular Degeneration

A team of investigators across the country, led by ERI members Julie Mares and Barbara Blodi (Ophthalmology and Visual Sciences), studied women who participated in the Women’s Health Initiative Observational Study and noted that having a combination of three healthy behaviors (healthy diet, physical activity, and not smoking) reduced risk for early age-related macular degeneration (AMD) by as much as three-fold when compared with those who had unhealthy lifestyles, lowering risk for advanced AMD in a person’s lifetime as well as the social and economic costs associated with treating it. Dr. Mares has just received funding from the National Eye Institute to further examine whether the likelihood of having AMD among people with healthy diets and lifestyles is stronger among women who have high-risk genetic traits. As co-principal Investigator with Dr. Sudya Iyengar of Case Western Reserve, Dr. Mares will also team with Dr. Blodi to investigate genetic predictors of high levels of plant pigments in the retina (thought to protect against AMD) and genetic predictors of high vitamin D status (related to lower risk for AMD in a previous study). They hope to learn how to enable those who have a family history of macular degeneration to lower their risk of getting the condition in

**Resveratrol Findings Promising for Future, Non-toxic Chemotherapeutics**

In the December issue of *Clinical Cancer Research*, Arthur Polans (Ophthalmology and Visual Sciences) describes a natural, non-toxic plant product, resveratrol, and its use for the treatment of ocular tumors and other types of cancer. Clinical trials sponsored by the National Cancer Institute recently demonstrated a significant anti-cancer effect in colorectal cancer patients supplemented with resveratrol. Dr. Polans has worked on determining the compound’s mechanism of action, with particular attention to increasing its bioavailability and thereby transforming resveratrol from a chemopreventive agent to a bona fide therapeutic. The Polans lab has determined that resveratrol enters tumor cells and activates both a rapid calcium signal that may be tied to changes in transcription and protein synthesis, as well as an effect on the mitochondria, the energy-producing organelles of the cell, culminating in tumor cell death. Resveratrol has a differential effect between cancer and normal cells, and the Polans lab has shown that normal cells do not respond to resveratrol by generating calcium signals. Similar findings have been made using other non-toxic natural products such as green tea (EGCG) and quercetin, and calcium signaling may form the basis for improved targeted therapy in cancer patients. Dr. Polans hopes that by understanding the mechanism by which resveratrol specifically activates tumor cell death, a new generation of non-toxic chemotherapeutics can be developed and used either as an alternative to some current but toxic chemotherapeutic compounds or during various maintenance protocols to reduce chemoresistance or the recurrence of tumors. [Subramanian L, Youssef S, Bhattacharya S, Kenealey J, Polans AS, van Ginkel PR. Resveratrol: challenges in translation to the clinic—a critical discussion. Clin Cancer Res. 2010 Dec 15;16(24):5942-8. Epub 2010 Nov 2.]

**We invite your feedback on this newsletter for the ERI membership.**

**Please respond with comments at:** [InSights Feedback](mailto:gmstirr@wisc.edu)

---

**About ERI InSights**

The UW Eye Research Institute will distribute InSights every other month. Its purpose is to build ERI community, advancing member connections and collaborations by sharing research and educational activities as well as member accomplishments and honors (including those of their lab associates and students). We welcome news of research advances, scholarly publications, grant awards, educational and professional honors, available lab positions, or shared equipment/services. If you have an item you wish to submit for possible inclusion, please send it to Gail Stirr at gmstirr@wisc.edu