



FYI: THE NEWSLETTER OF THE DAVIS HEART AND LUNG RESEARCH INSTITUTE AT OSU

June 2006

### Collaborative Leaders in Research - Bringing Groups Together

The DHLRI Education Committee hosted the 2006 Research Retreat at the Blackwell hotel on April 28. The event featured a poster competition and presentations on current research activities from members of each of the Institute's thematic program areas. Images from the retreat are below. Honorees and competition winners are listed on the following page.



Please join the Institute in congratulating the following individuals for their awards during the 2006 DHLRI Research Retreat held April 28th at the Blackwell.

### **Poster Competition Winners**

-received a \$500 travel award and certificate

Anasuya Sarkar - *Post Doc*  
Srinivas Iyengar - *Clinical Fellow*  
Trupti Joshi - *Grad Student*  
Vineet Bhasker - *Research Staff*  
Mikhail A. Gavrilin - *Research Scientist*

### **Best Overall Presentations – The Einstein Awards**

-awarded to the best presentation in each thematic area, as voted by the attendees

-received a certificate and the “prestigious” Einstein Award

Mark Wewers - *Inflammation, Fibrosis and Immune Function*  
AJ Cardounel - *Ischemia and Metabolism*  
James O’Brien - *Translational/Clinical*  
Valerie Bergdall - *Regenerative Medicine*  
Mark Ziolo - *Myocyte Biology and Disease*

Special recognition was also paid to Mark Wewers and Carl Leier. Dr. Wewers is one of the “founding fathers” of the Institute, playing a key leadership role in the “early” years. Dr. Leier is a significant mentor for many junior faculty, and has also been a key contributor to the formation of the Institute.

Congratulations to all of the winners and participants in the poster competition and program presentations, and thanks to all of the attendees of the day’s activities. The 2006 DHLRI Research Retreat was an exciting event that reflected the spirit of collaboration the Institute is built on.

### **Kudos**

**Gunjan Agarwal** has received an SIG award from NCIRR. This award is particularly special in that it is her third major new grant award this year and second major NIH award.

**Pedram Ghafourifar** has recently been named to the editorial board of *Rejuvenation Research*. *Rejuvenation Research* publishes cutting-edge work on rejuvenation therapies in the laboratory and clinic, as well as the latest research relevant to what these novel therapeutic approaches must do at the molecular and cellular level in order to be truly effective. (see <http://www.liebertonline.com/rej>)

**Thomas Hagele**, an undergraduate honors student in the lab of Narasimham Parinandi, won first place in the Agriculture/ Environmental Science category of the 2006 OSU Denman Undergraduate Research Competition. Thomas’s project is titled “*Mercury Activates Phospholipase D Signaling in Vascular Endothelial Cells: Mechanism of Vasculotoxicity.*”

The International EPR Society has chosen **Periannan Kuppusamy** to receive the International EPR Society’s Silver Medal for Biology and Medicine 2006. This is a joint award with **Jay**

**Zweier.** The award committee noted Dr. Kuppusamy's "important contributions to the development of modern EPR imaging and in vivo EPR spectroscopy in medicine."

DHLRI graduate student **Cameron Rink** received a two-year AHA pre-doctoral fellowship award to study the role of vitamin E in stroke. Professor Chandan Sen mentors Cameron, a student of the Nutrition graduate program in the Department of Surgery. Cameron's work focuses on a not-so-well studied form of natural vitamin E, alpha-tocotrienol, which Dr. Sen's group has recognized to be far more neuroprotective than the well-known alpha-tocopherol.

The International Society for Heart Research (ISHR) - North American Section has selected **Mark Ziolo** for the Young Investigator Award. Dr. Ziolo will give a presentation at the ISHR meeting in Toronto, Canada (June 13-16) where the winner will be picked based upon presentation, the written manuscript, and past accomplishments.

## New Members

Membership for the following individuals was recently approved. Please join us in welcoming them to the institute!

**L. James Lee, PhD;** Investigator (Chemical and Biomolecular Engineering)

**Haitao Li, PhD;** Associate Investigator (Davis Heart and Lung Research Institute)



## Recent Publications

Bai,S, Ghoshal, K, and Jacob, S.T (2006) Identification of T-Cadherin as a novel target of DNA methyltransferase 3B and its role in the suppression of nerve growth factor-mediated neurite outgrowth in PC12 cells, *J.Biol.Chem.* in press ( appeared online)

Billman GE and Kukielka M. Effect of exercise training on heart rate variability and susceptibility to sudden cardiac death: protection is not due to enhanced cardiac vagal regulation. *J Appl Physiol* 100: 896-906, 2006.

Chen YR, Chen CL, Yeh A, Liu X, and Zweier J. (2006) Direct and Indirect Roles of Cytochrome b in the Mediation of Superoxide Generation and NO Catabolism by Mitochondrial Succinate-Cytochrome c Reductase *J Biol Chem.* 281 13159-13168.

Iyengar S, Abraham W. (April 2006) Diuretic Resistance in Heart Failure. *Current Heart Failure Reports.* 3(1): 41-45.

Kukielka M, Seals DR, and Billman GE. Cardiac vagal modulation of heart rate during prolonged submaximal exercise in animals with healed myocardial infarctions: effects of training. *Am J Physiol (Heart Circ Physiol)* 290: H1680-H1685, 2006.

Li H, Liu X, Cui H, Chen YR, Cardounel AJ, Zweier JL. Characterization of the Mechanism of Cytochrome P450 Reductase-Cytochrome P450-mediated Nitric Oxide and Nitrosothiol Generation from Organic Nitrates. *J Biol Chem.* 2006 May 5; 281(18):12546-54.

Sarmila Majumder<sup>1</sup>, Huban Kutay<sup>1</sup>, Jharna Datta<sup>1</sup>, Dennis Summers<sup>1</sup>, Samson T. Jacob<sup>1, 2,3\*</sup> and Kalpana Ghoshal<sup>1</sup> (2006) .Epigenetic Regulation of metallothionein-I gene expression:

Differential regulation of methylated and unmethylated promoters by DNA methyltransferases and methyl CpG binding proteins , *J. Cell. Biochem*, in press (appeared online)



## June Programs and Events

**June 2: Research in Progress;** Peng George Wang, PhD, Chemistry/Biochemistry.\*

**June 9: Klassen Research Day;** Keynote speaker: Dr Louis Ignarro, Distinguished Professor of Pharmacology, UCLA and winner of the 1998 Nobel Prize in Physiology or Medicine. 170 Davis Heart & Lung.

**June 16: Research in Progress;** Elliott Crouser, MD, Pulmonary, Critical Care, and Sleep Medicine.\*

**June 21: Discovery Series;** Donald Bers, PhD. Noon, 170 Davis Heart & Lung.

**June 23:** Special Research Presentation; Craig Coopersmith, MD, FACS, FCCM, Surgery and Anesthesiology, Washington University School of Medicine.\*

**June 30:** Research in Progress; Mark Wewers, MD, Pulmonary, Critical Care, and Sleep Medicine.\*

*\*Research in Progress presentations are held at noon on Fridays in 165 Davis Heart & Lung.*

## Electronic submission of NIH R21/R03 applications is required for June 1 deadline

NIH is phasing-in the requirement for the electronic submission of grant proposals. For the June 1 deadline, electronic submission will be required for R21 and R03 (conference grant) proposals. The Office of Research requests that the completed electronic proposals be submitted to the Research Foundation at least 5 business days before the deadline (see the attached letter). Therefore, the internal **deadline will be May 25, 2006** for the June 1 deadline. There are numerous changes in the electronic forms that we would like to review with you before you put together your proposal. On May 25<sup>th</sup>, Karla will provide an administrative review of your proposal and submit your proposal to grants.gov.

## COM Research Investment Fund Deadline is June 30

The College of Medicine Research Investment Fund (RIF) Advisory Committee is dedicated to the institution's long-term research strategies and supporting investment in research and research infrastructure. The RIF committee considers applications in the general areas of new faculty start-up, faculty salary support, faculty bridge funding, faculty retention packages, equipment purchase, core facility support, and matching funds for grant proposals. The RIF Committee carefully considers request on an individual basis. **The Summer Quarter deadline is June 30.**

To find the *Request for Biomedical Research Investment Fund* application and notes for guidance, click on "Forms" and then "RIF Application Information" under the Research tab on OneSource.

## Changes to NIH Application Forms for New and Competing Proposals

**These changes affect competing proposals due on or after May 10, 2006 and non-competing continuation proposals due on or after June 1, 2006.**

NIH has made some modifications in its application process for both paper and electronic proposals. The changes are summarized at <http://grants1.nih.gov/grants/guide/notice-files/NOT-OD-06-054.html>.

The most significant changes are:

- **Removing the PI signature from the cover page of competing and non-competing application forms and the SF 424 required electronic submission through Grants.gov.** Now, prior to submitting an application, OSURF must obtain from the Principal Investigator (PI) written assurance of compliance with NIH requirements. OSURF has amended the Statement of Responsibility on the ePA-005, so that the PI's electronic signature on that form meets NIH's requirement for competing proposals, i.e., those that use PHS 398 or the SF 424 R&R applications. OSURF is still developing a process for non-competing continuation applications, which use the PHS 2590 form.
- **Requiring that effort devoted to a project be indicated in person months rather than % of appointment.** Personnel supported by NIH awards now indicate effort using the number of calendar, academic, and/or summer months they will provide to award related activities. This change affects several sections of the applications (e.g., budget, budget justification, other support, and key personnel report).

For more details on all of the application changes see <http://grants.nih.gov/grants/guide/notice-files/NOT-OD-06-056.html> for applications that require the PHS 398 form and <http://grants1.nih.gov/grants/guide/notice-files/NOT-OD-06-058.html> for non-competing progress reports that use the PHS 2590 application. NIH has also posted FAQs to assist with the transition to person months at [http://grants.nih.gov/grants/policy/person\\_months\\_faqs.htm](http://grants.nih.gov/grants/policy/person_months_faqs.htm).

The PHS 398 and PHS 2590 forms have been modified to include the new requirements. The revised forms must be used for all competing proposals with deadlines on or after May 10th 2006 (the T32 training grant deadline) and all non-competing applications due on or after June 1, 2006. Please contact Karla Gengler-Nowak if you have any questions about NIH's new requirements.

## Third Frontier Awards \$11M to OSU for Biomedical Projects

The state's Third Frontier program has awarded more than \$11 million in grants to two biotechnology projects at Ohio State. OSU's Biomedical, Structural, Functional and Molecular Imaging Enterprise received \$7.9 million to assist in the development of non-invasive hybrid imaging used to treat diseases. Michael Knopp, MD, PhD, professor and chair of the Department of Radiology and DHLRI Investigator, is the PI. Philips Medical Systems of Cleveland and Cardinal Health will work with OSU to commercialize hybrid imaging techniques and imaging-based therapy.

The Advanced Biomedical Devices for Diagnosis and Therapy project at OSU received \$3.5 million for its magnetic cell separation technology, used for rare cancer cell enrichment therapies. Jeff Chalmers, PhD, professor, OSU College of Engineering and DHLRI Investigator, is the PI.

## New Awards: Federal, State, Foundations

PI: Gunjan Agarwal  
Title: Atomic force microscope  
Sponsor: NCRR, Award No. 1 S10 RR021199-01  
Amount: \$316,887  
Start date: 6/1/06      End date: 5/31/07

## New Industry Contracts

PI: Garrie Haas  
Title: Stress testing core lab  
Sponsor: St. Jude Medical  
Start date: 4/12/06      End date: 10/31/06

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[Chris.Brakenbury@osumc.edu](mailto:Chris.Brakenbury@osumc.edu). The newsletter is also available online at  
<http://heartlung.osu.edu>. To unsubscribe, please contact Chris via e-mail.

