

## THE NEWSLETTER OF THE DAVIS HEART AND LUNG RESEARCH INSTITUTE

KATHLEEN MCNALLY, EDITOR; COLETTE TORNIK, ASSOCIATE EDITOR

AUTUMN 2008

### Director's Corner

Welcome to the new academic school year! I hope that everyone had a great summer. As we begin this new academic year, I want to take this opportunity to encourage everyone to attend the 3rd Annual DHLRI Research Retreat on Tuesday, October 28, 2008 at The Blackwell. The theme of this year's retreat will be "Cellular and Molecular Therapy". Experts in these fields will present on the latest trends in Cellular and Molecular Therapy highlighting their discoveries. A special attraction at this year's retreat will be the announcement of the Jay and Jeanie Schottenstein Prize in Cardiovascular Sciences. Finally, poster and oral presentations will also be given by investigators associated with DHLRI.

To kick-off our activities, we will hold a DHLRI Research Retreat Abstract Competition (oral and poster) that will take place on Tuesday October 21, 2008 in the Neuropsych Gymnasium. The best posters will be displayed and the top oral finalists will have an opportunity to present their studies at the retreat on October 28, 2008. Travel awards will be given to the top finalists and all winners will be announced at the retreat. All interested participants should submit a copy of their abstract along with the abstract submission form to [colette.tornik@osumc.edu](mailto:colette.tornik@osumc.edu) no later than Tuesday, October 7, 2008.

I would like to extend my sincere thanks to the DHLRI Education Committee for all their hard work in planning the retreat this year.

Dr. Terry Elton, DHLRI Interim Director



### DHLRI New Employees

*Please join us in welcoming these new employees to the DHLRI. Contact [Kathleen.McNally@osumc.edu](mailto:Kathleen.McNally@osumc.edu) to announce a new employee in the next issue.*

- Dana Glenn- DHLRI Grants Manager
- Lori Short- Cardiology Administrative Assistant
- Angela Huffman- Sponsored Program Officer, OSURF
- Sean Miller RN, BSN- Clinical Research Specialist, CCTRO
- Pedro Vargas-Pinto- Graduate Research Assistant, PI: David Feldman
- Tomasina Wall- Research Associate, PI: Todd Pesavento
- Jacqueline Vaughn- Cardiology Administrative Assistant
- Ming Cai- Post Doctoral Researcher, PI: Guanglong He
- Mohamed Elmahdy- Senior Research Associate, PI: Jay Zweier
- Karthikeyan Krishnamurthy- Post Doctoral Researcher, PI: Govindasamy Ilangovan
- Katrina Miller- Lab Services Coordinator, PI: Bryan McElwain
- Pengfei Zhang- Post Doctoral Researcher, PI: Mani Vannan
- Jannine Herbert- Cardiology Administrative Assistant
- Jami Holzaepfel- Clinical Research Coordinator, CCTRO
- Kim Mahler- Clinical Research Coordinator, PI: Todd Pesavento
- Judy Osborn- Research Associate, PI: Todd Pesavento
- Sarah Sansom- Research Assistant, PI: David Feldman
- Jamie Tracy- Administrative Assistant to Dr. Tom Ryan, 110 DHLRI
- Aruna Biswas- Post Doctoral Researcher, PI: Vincent Pompili
- Manjusri Das- Senior Research Associate, PI: Vincent Pompili
- Ragu Kanagasabi- Research Associate, PI: Govindasamy Ilangovan
- Sarath Meduru- Research Associate, PI: Periannan Kuppusamy
- Jessica West- Clinical Research Coordinator, PI: Sanjay Rajagopalan



## DHLRI Microscopy Core

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This is a friendly reminder of the **DHLRI Microscopy Core Fee Waiver Program**. The program is designed to encourage DHLRI members to explore the available resources in our Microscopy Core. Core services can be performed at reduced rates for preliminary microscopy work done in support of a pending grant submission. The support will be in the form of up to 10 hours of usage at no charge or up to 25 hours at 50% of the prevailing rates. Please see the policy and application on the Microscopy website "Documents and Forms" page at: <http://medicine.osu.edu/sitetool/sites/pdfs/dhlicore/FeeWaiverProgram.pdf>



## Kudos

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**Dr. Rishipal Bansode**, from Kamal D. Mehta, M.Phil., Ph.D. lab, has been selected as NY Academy of Science representatives for EuroBIO 2008 to be held in Paris, France from October 7-9, 2008.

**Randy A. Burgett**, who is a undergraduate research assistant in Dr. Villamena's lab, has published a paper in the Journal of Physical Chemistry A, (2008, 112, 2447-55) on "Superoxide radical anion adduct of 5,5-dimethyl-1-pyrroline N-oxide (DMPO). 3. Effect of mildly acidic pH on the thermodynamics and kinetics of adduct formation". This work investigated that DMPO as more efficient superoxide scavenger in acidosis conditions, a condition common to ischemic systems.

**Steven M. Field**, also an undergraduate from Dr. Villamena's lab, who recently has a paper entitled "Theoretical and Experimental Studies of Tyrosyl Hydroperoxide Formation in the Presence of H-Bond Donors" which is currently in press now in the Chemical Research in Toxicology. Steven is a major in Genetics and his work involves investigation of how H-bond donating molecules such as amino acids, urea or alcohols can induce oxidative damage to tyrosyl radical, an active site in key enzymes such as ribonucleotide reductase.

**Dr. Subha Raman** was awarded a \$125,000 grant from the National Ataxia Foundation to study microvascular disease in patients with Friedreich ataxia.

## NCI Funds \$10.9M for Retrovirus Models of Cancer

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COLUMBUS, Ohio - A team of researchers from Ohio State's Comprehensive Cancer Center (OSUCCC) and the University's College of Veterinary Medicine have received a \$10.9 million, five-year grant from the National Cancer Institute (NCI) to further their studies of retrovirus-associated cancer. Principal investigator Michael Lairmore, DVM, PhD, professor and chair of the Department of Veterinary Biosciences, associate director for basic research at the OSUCCC, and a member of the OSUCCC's Viral Oncogenesis Program, leads the team. The new grant follows a previous five-year, \$8.9 million NCI grant received in 2003 for studies investigating how some retroviruses cause white blood cells, called lymphocytes, to proliferate, leading to cancer. Retroviruses include the human T-lymphotropic virus type I and II (HTLV-1 and HTLV-2), which have been linked to adult T-cell leukemia and lymphoma, and the human immunodeficiency virus (HIV), the cause of AIDS. The study comprises five interactive projects and three cores. "Each laboratory has interrelated goals to define critical biological events that control the alteration of lymphocytes," Lairmore says. "These findings will help us further discover therapeutic targets against retroviral-induced lymphoma and its lethal side effects syndromes, such as hypercalcemia." Additional information: [The Department of Veterinary Biosciences](#) or contact Dr. Michael Lairmore: (614) 292-4489

## Ross Academic Advisory Committee Request for Proposals

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The Ross Academic Advisory Committee (RAAC) oversees a pool of dollars provided by the Heart Signature Program to fund research initiatives within the OSU Heart Center. The money is distributed quarterly and the application deadlines are the 15<sup>th</sup> day of July, October, January, and April. Applicants should be a faculty member affiliated with the OSU Heart Center. Any qualified individual, regardless of rank or seniority, is invited to submit a proposal. A strong preference is given to proposals that involve a new program, project, or direction. Both clinical and basic research projects within the broad disciplines of heart and/or vascular disease are eligible for support. Funds are provided for one year and are non-renewable. The intent of the program is to support new ideas or initiatives (i.e., start-up funds) for projects that will lead to sustainable funding after the one year period.

The application should include a brief summary of aims, background information, and methods. A one page budget is required and should include: 1) why the funds are needed, 2) how the award will translate in sustainable funding, and 3) whether any alternative funding sources exists. The entire application should not exceed eight pages. The application should be submitted prior to each of the quarterly deadlines electronically to Mr. Larry Anstine, CEO of the Ross Heart Hospital. You are also encouraged to communicate directly with your division chief or institute director prior to submission. This will facilitate the presentation of the proposal at the committee meeting. If there are any questions regarding the application process, please contact Dr. Thomas Ryan.

## Upcoming Events

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**2008 Fall Blood Drives:** The dates for the fall drives, held in the Ross lobby, are listed below:

Friday, November 7, 2008 from 7:30 a.m.-5:30 p.m.

Monday, December 1, 2008 from 11 a.m.-5 p.m.

Tuesday, December 23, 2008 from 8:30 a.m.-2:30 p.m.

**Amy Sturm, MS, CGC**, certified genetic counselor for the Cardio genetics Program at OSUMC within the Division of Human Genetics, is Co-Chair of the **2008 National Society of Genetic Counselors Conference**, "Taking Heredity to Heart: Cardiovascular Genetics, An Overview". The conference will be held on October 23rd and 24th, 2008 in Los Angeles, California. To register for this conference, or to purchase online access to content, you can visit <http://www.nsgc.org/conferences/aec.cfm>.

## New Awards: Federal, State, and Foundations

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PI: Mark Angelos

Sponsor: American Heart Association-Great Rivers Affiliate

Title: *The role of low flow reperfusion in cardiac resuscitation*

PI: Jonathan Butchar                      Co-I: Susheela Tridandapani

Sponsor: American Cancer Society

Title: *Molecular analysis of IL-23 during antibody-mediated tumor clearance*

PI: Cynthia Carnes

Sponsor: NHLBI, Award No. 1 R01 HL089836-01A1

Title: *Heart failure and atrial fibrillation*

PI: Curt Daniels  
Sponsor: NIH/NHLBI, Award No. R01 HL78946  
Title: *Pharmacogenomics in pulmonary arterial hypertension study*

PI: Periannan Kuppusamy      Co-Is: Peng George Wang, Erick Villamena  
Sponsor: NIBIB, Award No. 1 R01 EB007373-01A2  
Title: *Novel trityl probes for measurement and bi-modal imaging of superoxide*

PI: Steve Lee      Co-Is: Len Brillson, Wu Lu  
Sponsor: National Science Foundation  
Title: *Development of AlGaN biosensor sensitive in physiological saline*

PI: Sam Parthasarathy  
Sponsor: NHLBI, Award No. 2 R01 HL088397-01A2  
Title: *Novel mechanisms by which aspirin might protect against atherosclerosis*

PI: Adam Pleister      Co-Is: Terry Elton, David Feldman  
Sponsor: Heart Failure Society of America  
Title: *A novel model of nonischemic chronic heart failure with cardiac resynchronization therapy and beta blockade*

PI: Brad Rovin      Co-Is: Haikady Nagaraja, Xiaolan Zhang  
Sponsor: NIDDK, Award No. 1 R21 DK077331-01A2  
Title: *Protein phenotyping of SLE nephritis flare cycle*

PI: Krithika Selvarajan      Co-I: Sampath Parthasarathy  
Sponsor: American Heart Association – Great Rivers Affiliate  
Title: *Adherent and non-adherent macrophages in cell survival and death*

PI: Virginia Sanders  
Sponsor: NIH /NIAID  
Title: *CD86 Signaling in B Cells*

PI: Virginia Sanders  
Sponsor: NIH /NIAID  
Title: *Neuromodulation of the Antibody Response*

## New Industry Support

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PI: Ragavendra Baliga  
Sponsor: Bristol-Myers Squibb Co.  
Title: *AVERROES*

PI: Ragavendra Baliga  
Sponsor: Jewish General Hospital  
Title: *Zyban as an effective smoking cessation aid for patients following an acute coronary syndrome: The ZESCA trial*

PI: Emile Daoud  
Sponsor: Biosense Webster  
Title: *Navistar ThermoCool catheter for the radiofrequency ablation of symptomatic paroxysmal atrial fibrillation*

PI: Phil Diaz  
Sponsor: Boehringer Ingelheim Pharmaceuticals  
Title: *BIPI protocol 1184.14*

PI: Phil Diaz  
Sponsor: Mpex Pharmaceuticals  
Title: *Mpex 301*

PI: David Feldman  
Sponsor: Medtronic  
Title: *Characterization of chronotropic incompetence in diastolic heart failure patients*

PI: Veronica Franco  
Sponsor: Cardiac Pacemakers, Inc.  
Title: *RESET*

PI: Garrie Haas  
Sponsor: CardioKinetix  
Title: *Coordinator support for the PARACHUTE study*

PI: Ayesha Hasan  
Sponsor: Biotronik  
Title: *Echo-CRT*

PI: John Hummel                      Co-I: Vincent Pompili  
Sponsor: Boston Scientific  
Title: *Assessment of cardiac lesion formation and location*

PI: Ernest Mazzaferri, Jr.  
Sponsor: Cordis  
Title: *ELITE*

PI: Vincent Pompili  
Sponsor: Arteriocyte  
Title: *Functional evaluation of Magellan™ Platelet Rich Plasma Stem Cell Fraction for Cardiovascular Therapeutics and Ex vivo expansion of Cord Blood Derived (UCB) CD133+ Stem using nanofiber culture technique*

PI: Chandan Sen                      Co-I: Gayle Gordillo  
Sponsor: Carotech  
Title: *Efficacy of natural vitamin E Tocotrienol on the treatment of scars*

PI: Namita Sood  
Sponsor: Actelion Clinical Operations  
Title: *AC-063A302 Prowess 15*

PI: Namita Sood  
Sponsor: Actelion Clinical Operations  
Title: *AC-063A301 Prowess 15 extension*



## Recent Publications

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Bhatt NY, Wood KL.

What defines abnormal lung function in older adults with chronic obstructive pulmonary disease?  
Drugs Aging. 2008;25(9):717-28.

Billman GE.

The cardiac sarcolemmal ATP-sensitive potassium channel as a novel target for anti-arrhythmic therapy.  
Pharmacol Ther. 2008 Jul 26.

Butchar JP, Cremer TJ, Clay CD, Gavrilin MA, Wewers MD, Marsh CB, Schlesinger LS, Tridandapani S.  
Microarray analysis of human monocytes infected with Francisella tularensis identifies new targets of host response subversion.

PLoS ONE. 2008 Aug 13;3(8):e2924.

Jones Charles I. III, Han Zhaosheng, Presley Tennille, Varadharaj Saradhadevi, Zweier Jay L., Ilangovan Govindasamy, Alevriadou B. Rita. Endothelial cell respiration is affected by the oxygen tension during shear exposure: Role of mitochondrial peroxynitrite. Am J. Physiology Cell Physiol (E-Published Ahead of Print)

Khanna S, Park HA, Sen CK, Golakoti T, Sengupta K, Venkateswarlu S, Roy S.

Neuroprotective and anti-inflammatory properties of a novel demethylated curcuminoid.  
Antioxid Redox Signal. 2008 Aug 26. (E-Published Ahead of Print)

Mays Tessily A., Binkley Philip F., Lesinski Amanda, Doshi Amit A., Quail Michael P., Margulies Kenneth B., Janssen Paul M.L., Rafael-Fortney Jill A. "Claudin-5 levels are reduced in human end-stage cardiomyopathy." Journal of Molecular and Cellular Cardiology. 45: 81-87; 2008.

Ng TM, Dasta JF, Durtschi AJ, McLaughlin TP, Feldman DS.

Characteristics, Drug Therapy, and Outcomes From a Database of 500,000 Hospitalized Patients With a Discharge Diagnosis of Heart Failure.

Congest Heart Fail. 2008 July . August;14(4):202-210.

Sopirala Madhuri M., Pope-Harman Amy, Nunley David R., Moffatt-Bruce Susan, Ross Patrick, Martin Stanley I. "Multidrug-resistant Acinetobacter baumannii Pneumonia in Lung Transplant Recipients." The Journal of Heart and Lung Transplantation. 27(7): 804-807, 2008.

Sridhar A, Nishijima Y, Terentyev D, Terentyeva R, Uelmen R, Kukielka M, Bonilla IM, Robertson GA, Gyorke S, Billman GE, Carnes CA.

Repolarization abnormalities and afterdepolarizations in a canine model of sudden cardiac death.

Am J Physiol Regul Integr Comp Physiol. 2008 Sep 3. (E-Published Ahead of Print)

Sun Benjamin C., Firstenberg Michael S., Louis Louis B., Panza Antonio, Crestanello Juan A., Sirak John, Sai-Sudhakar Chittoor B. "Placement of Long-term Implantable Ventricular Assist Devices Without the Use of Cardiopulmonary Bypass." The Journal of Heart and Lung Transplantation. 27(7): 718-721, 2008.

Ziolo MT, Kohr MJ, Wang H.

Nitric oxide signaling and the regulation of myocardial function.

J Mol Cell Cardiol. 2008 Aug 3.

*To submit news items, for more information, or to unsubscribe,  
email Kathleen McNally: [Kathleen.McNally@osumc.edu](mailto:Kathleen.McNally@osumc.edu).  
The newsletter is available online at <http://heartlung.osu.edu>.*

