

Albany Medical College Center for Cardiovascular Sciences Newsletter



New Faculty Member—Dr. Mohamed Trebak

Dr. Trebak joined the Center for Cardiovascular Sciences in November of 2006. His work focuses on calcium signaling in endothelial cells. He comes to us from the NIEHS, National Institutes of Health in Research Triangle Park in North Carolina.

Commencement was held on May 24, 2007 at SPAC in Saratoga, NY

Ph.D. Degrees were awarded to:

Dr. Suzanne J. House

"Calcium/Calmodulin-Dependent Protein Kinase II- δ Regulation of Vascular Smooth Muscle Cell Proliferation"

Mentor: Harold A. Singer, Ph.D.

Dr. Qi Lu

"Redox Control of Nitric Oxide-Mediated G₀/G₁ Cell Cycle Arrest and Cytotoxicity"

Mentor: David Jourdeuil, Ph.D.

M.S. Degrees were awarded to:

Deana Ferreri

"The Role of N-Cadherin in Endothelial Cell Functions"

Mentor: Peter A. Vincent, Ph.D.

Whitney J. Sealls

"The Liver-POR Knockout: A Unique Model to Study the Role of Fat in the Development of Non-Alcoholic Steatohepatitis"

Mentor: Concetta C. DiRusso, Ph.D.

Melissa Zachar Mercure

"Calcium/Calmodulin Dependent Protein Kinase II Dependent Regulation of Vascular Smooth Migration"

Mentor: Harold A. Singer, Ph.D.

Congratulations to:

Our Awards Day Winners: **Katharine Halligan** - The Dean's Certificate for Significant Achievement in Research Endeavors; **Deana Ferreri** - The Dean's Certificate and Leonard Procita Prize for Excellence in Teaching; and **Dr. David Jourdeuil** - The Helen M. Molinari Graduate Encouragement and Merit Award (GEM)

Drs. **Peter A. Vincent** and **Yong-Xiao Wang** for their recent promotions to Professor with Full Tenure.

Dr. **Roman G. Ginnan** for his recent promotion to Assistant Professor.

Dr. **Peter A. Vincent** was presented with the **Sosa Academy Faculty Teaching Scholar Award** at this year's graduation ceremonies. This honor now makes him a member of the prestigious Sosa Academy.

Melissa (Dr. Singer's Lab) and Kevin Mercure who were joined in marriage on July 7, 2007.

PUBLICATIONS

- ◆ Jones RJ, **Jourd'heuil D**, Salerno JC, Smith SME, **Singer HA**. iNOS regulation by calcium/calmodulin-dependent protein kinase II in vascular smooth muscle. *American Journal of Physiology - Heart and Circulatory Physiology*. ;292(6):H2634-42, 2007
- ◆ **House SJ, Ginnan RG**, Armstrong SE, **Singer HA**. Calcium/calmodulin-dependent protein kinase II- δ isoform regulation of vascular smooth muscle cell proliferation. *American Journal of Physiology - Cell Physiology*. 292(6):C2276-87., 2007.
- ◆ Wallrabe H, Bonamy G, Periasamy A, **Barroso M**. Receptor complexes cotransported via polarized endocytic pathways form clusters with distinct organizations. *Molecular Biology of the Cell*. 18(6):2226-43, 2007.
- ◆ Kirschner KN, Lexa KW, Salisbury AM, Alser KA, **Joseph L, Andersen TT**, et al. Computational design and experimental discovery of an anti-estrogenic peptide derived from α -fetoprotein. *Journal of the American Chemical Society*. 129(19):6263-8, 2007.
- ◆ Wang X, Lennartz MR, **Loegering DJ**, Stenken JA. Interleukin-6 collection through long-term implanted microdialysis sampling probes in rat subcutaneous space. *Analytical Chemistry*. 79(5):1816-24, 2007.
- ◆ Wang Q-, **Zheng Y-**, Dong L, Ho Y-, Guo Z, **Wang Y-**. Role of mitochondrial reactive oxygen species in hypoxia-dependent increase in intracellular calcium in pulmonary artery myocytes. *Free Radical Biology and Medicine*. 42(5):642-53, 2007.
- ◆ **Zheng YM, Wang YX**. Sodium-calcium exchanger in pulmonary artery smooth muscle cells. *Annals of the New York Academy of Sciences*. 1099:427-35, 2007.
- ◆ **Black PN, DiRusso CC**. Yeast acyl-CoA synthetases at the crossroads of fatty acid metabolism and regulation. *Biochimica et Biophysica Acta - Molecular and Cell Biology of Lipids*. 1771 (3):286-98, 2007.
- ◆ **Wang R, Li Q-, Anfinogenova Y, Tang DD**. Dissociation of crk-associated substrate from the vimentin network is regulated by p21-activated kinase on ACh activation of airway smooth muscle. *American Journal of Physiology - Lung Cellular and Molecular Physiology*. 292(1):L240-8, 2007.
- ◆ **Liu Q-, Zheng Y-, Wang Y-**. Two distinct signaling pathways for regulation of spontaneous local Ca^{2+} release by phospholipase C in airway smooth muscle cells. *Pflugers Archiv European Journal of Physiology*. 453(4):531-41, 2007.
- ◆ **Andersen TT**, Georgekutty J, Defreest LA, Amaratunga G, Narendran A, Lemanski N, Jacobson HI, Bennett JA. An α -fetoprotein-derived peptide reduces the uterine hyperplasia and increases the antitumor effect of tamoxifen. *Br J Cancer*. 97(3):327-33, 2007.
- ◆ Kirschner KN, Lexa KW, Salisbury AM, Alser KA, **Joseph L, Andersen TT**, Bennett JA, Jacobson HI, Shields GC. Computational design and experimental discovery of an antiestrogenic peptide derived from α -fetoprotein. *J Am Chem Soc*. 129(19):6263-8, 2007.
- ◆ Sierralta WD, Epanan MJ, Reyes JM, Valladares LE, **Andersen TT**, Bennett JA, Jacobson HI, and Pino AM. A peptide derived from α -fetoprotein inhibits the proliferation induced by estradiol in mammary tumor cells in culture. *Oncology Reports, In Press*, 2007.
- ◆ Lu Q, Jourd'heuil FL, **Jourd'heuil D**. Redox control of G1/S cell cycle regulators during nitric oxide-mediated cell cycle arrest. *J Cell Physiol*. 212(3):827-39, 2007.
- ◆ Ling Dong, **Yun-Min Zheng, Dee Van Riper, Rakesh Rathore, Qing-Hua Liu, Harold A. Singer, Yong-Xiao Wang**. Functional and molecular evidence for impairment of calcium-activated potassium channels in type-1 diabetic cerebral artery smooth muscle cells. *J Cereb Blood Flow Metab*. (advance online publication, August 8, 2007)
- ◆ **House S, Zachar M, Ginnan R, Van Riper D, Singer HA**. Ca^{2+} /Calmodulin-Dependent Protein Kinase II Signaling in Vascular Smooth Muscle. In: *Signal Transduction in Cardiovascular System Health and Disease*. *Advances in Biochemistry in Health and Disease* Springer Publisher, In Press. (Invited Book Chapter)
- ◆ **Anfinogenova Y, Wang R, Li QF, Spinelli AM, Tang DD**. Abl silencing inhibits CAS-mediated process and constriction in resistance arteries. *Circ Res*. (4):420-8, 2007.
- ◆ **Black, P.N., DiRusso, C.C.** Yeast acyl-CoA synthetases at the crossroads of fatty acid metabolism and regulation 2007) *Biochimica et Biophysica Acta - Molecular and Cell Biology of Lipids*, 1771 (3), pp. 286-298.
- ◆ Obermeyer T, **Fraisl P, Dirusso CC, Black PN**. Topology of the yeast fatty acid transport protein Fat1p: Mechanistic implications for functional domains on the cytosolic surface of the plasma membrane. *J Lipid Res*. 2007 Aug 6; [Epub ahead of print]
- ◆ **Li H, Melton EM, Quackenbush S, Dirusso CC, Black PN**. Mechanistic studies of the long chain acyl-CoA synthetase Faa1p from *Saccharomyces cerevisiae*. *Biochim Biophys Acta*. 2007 Jun 12; [Epub ahead of print]

GRANTS AWARDED

David Jourd'heuil

- ⇒ Phillip Morris, 3 year Award starting January 1, 2007. "Nitric Oxide Metabolism in the Vasculature and Cigarette Smoke"
- ⇒ Collaborating on a project funded by the CDC with Dr. Matthew Mauer from the New York State Department of Health. The project is titled "A Study of Lower Respiratory Effects in NYS World Trade Center Responders with Varying Exposures as Determined by an Exposure Assessment Tool"
- ⇒ Collaborating on a project funded by the NIH with Dr. Alexander Mongin from the Center for Neuropharmacology and Neurosciences. Project is titled "Defects of Neurotransmission in Ischemia Reperfusion".

Daniel Loegering

Co-Investigator—NIH/NIBIB: PI JA Stenken—"Quantitative biocompatibility of implanted materials" Renewal—5 years

INVITED SEMINARS

Thomas T. Andersen

- ◆ Department of Physiology, Dartmouth Medical School, Hanover NH, February 2007—"A Proposed Unified Mechanism for the Prevention of Breast Cancer by the Hormones of Pregnancy"
- ◆ Department of Biology, Union College, Schenectady NY, April 2007—"A Proposed Unified Mechanism for the Prevention of Breast Cancer by the Hormones of Pregnancy"

Paul N. Black

January 2007, "Exploiting model systems to address human diseases caused by disruptions in fatty acid trafficking," Department of Biochemistry and Molecular Biology, Pennsylvania State University, University Park, PA

Concetta C. DiRusso

April 2007. "Jack Sprat should eat the right fat," Bethlehem Central High School, "Science Today Series," , Delmar, NY

Harold A. Singer

March 2007, "CaM Kinase II Regulation of Vascular Smooth Muscle Proliferation:", Drexel University Medical School,

STUDY SECTIONS/GRANT REVIEWS/EDITORIAL BOARDS/INSTITUTIONAL COMMITTEE ACTIVITIES

- ⇒ **Dr. Harold A. Singer**, member of the NIH Study Section, Vascular Cell and Molecular Biology, met in Washington, DC, June 11-12.
- ⇒ **Drs. Schwarz, Van Riper, Vincent and Wang** recently reviewed more than 60 grants for the American Heart Association. These included Predoctoral and Postdoctoral Fellowships, Scientist Development Grants, and Grant-In-Aids. The meetings were held in Hartford, CT the week of April 23.
- ⇒ **Dr. Thomas Andersen**, NIH Special Emphasis Panel to assess training grant applications, June 2007
- ⇒ **Dr. David Jourdeuil** is now serving on the editorial board for *Free Radical in Biology and Medicine*
- ⇒ **Dr. Harold Singer** is now serving on two committees at RPI. The Department of Biomedical Engineering at Rensselaer External review Committee and the Department of Biomedical Engineering at Rensselaer Advisory Council
- ⇒ **Dr. John Kaplan** served in a consensus panel sponsored by the Office of Research Integrity to develop educational objectives for the responsible conduct of research.

NATIONAL MEETINGS

Thomas T. Andersen

- ⇒ Annual Biomedical Research Conference for Minority Students, Anaheim CA, October 2007. Instruction session for Student Evaluations.
- ⇒ Presented "Physician Investigators: Nurturing the Seed" together with Dr. Elizabeth Higgins, Associate Dean for Student Affairs at: AAMC Careers in Medicine meeting, Salt Lake City June 2007—A 'best practices' session, AMC and the Lerner School of Medicine at Cleveland Clinic were invited to compare and contrast our outstanding models of training physician scientists
- ⇒ GREAT Group MD-PhD Section Annual Meeting—Keystone CO July 2007
- ⇒ GREAT Group Steering Committee—Washington DC June 2007

Suzanne J. House presented at the AHA Arteriosclerosis, Thrombosis and Vascular Biology Meeting (April 19-21) in Chicago, IL. "Calcium/Calmodulin-Dependent Protein Kinase II-d Regulates Vascular Smooth Muscle Cell Proliferation" House SJ, Armstrong, S, Ginnan, R, Singer H

Rakesh Rathore, Yun-Min Zheng, Yong-Xiao Wang: "Hypoxia activates NADPH oxidase through mitochondrial ROS-PKCepsilon signaling axis in pulmonary artery smooth muscle cells", 51st Annual Meeting of Biophysical Society, Baltimore,

FUTURE CCS SEMINARS

George C. Wellman, Ph.D.

Associate Professor
Department of Pharmacology
University of Vermont

*"Suppression of Voltage-Dependent
Potassium Channels and Cerebral
Vasospasm"*

Hosted by Dr. Yong-Xiao Wang

September 19, 2007
MS-316; 12:00-1:00
(Visiting Scientist)

William Aird, M.D.

Associate Professor
Department of Medicine,
Harvard Medical School
Division of Hematology-Oncology, Beth Israel
Deaconess Medical Center
"TBA"

Hosted by John J. Schwarz

October 24, 2007
Huyck; 12:00-1:00
(Visiting Scientist)

James W. Putney, Jr., Ph.D.

Chief, Calcium Regulation Section
Laboratory of Signal Transduction
National Institute of Health –
Environmental Health Sciences
*"Novel Mechanisms for Receptor-Regulated
Calcium Influx"*

Hosted by Mohamed Trebak

December 5, 2007
MS-316; 12:00-1:00
(Distinguished Visiting Scientist)



Teresa Barroso Rodrigues

August 21, 2007
8 pounds, 8 ounces
19.5 inches long

**Congratulations to Margarida
and Family**

CCS Administrative Staff

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