

Tennessee Physiological Society Fall Meeting

October 9, 2015

University of Tennessee at Chattanooga

University Center (Chattanooga Rooms)

- 7:30 – 8:00 Continental Breakfast
- 8:00 – 8:10 Opening Remarks
Greg Heath, DHSc, MPH, Chair UTC Host Committee
- 8:10 – 8:45 *“Akt isoform-dependent regulation of ATP-binding cassette A1 (ABCA1) expression”*
Emmanuel Okoro, PhD, Fellow, Physiology, Meharry Medical College, Nashville, TN
- 8:50 – 9:25 *“Astrocytic Glutamate Transporters as Potential Drug Targets to treat Neurodegenerative Diseases.”*
Eunsook Lee, PhD, Associate Professor of Physiology, Meharry Medical College, Nashville, TN
- 9:30 – 10:05 *“Acute Kidney Injury: Oxidant Injury and Apoptosis-Therapeutic Options”*
James Tumlin MD, Professor Medicine, UT College Medicine Chattanooga
- 10:05 – 10:35 Break
- 10:35 – 11:10 *“CD8+ T cells regulate the activation of hepatic stellate cells in nonalcoholic fatty liver disease”*
Arion Kennedy, PhD, Research Instructor, Department of Molecular Physiology and Biophysics, Vanderbilt University Medical Center, Nashville, TN
- 11:20 - 12:20- *“Peripheral Arterial Disease: Benefits of Exercise”*
Ronald L. Terjung, PhD, Professor Emeritus, Department of Biomedical Sciences, School of Veterinary Medicine, University of Missouri, Columbia, MO
- 12:20 – 1:20 Lunch
- 1:30 – 2:45 Poster Session (see attached poster titles)

2:50 - 3:15 *“The Novel Adipokine C1q/TNF-related protein 3 (CTRP3) as a Treatment for Fatty Liver disease “*

Jonathan Peterson, PhD, Assistant Professor, Department of Health Sciences,
College of Public Health, East Tennessee State University, Johnson City, TN

3:15 – 3:50 *“RNA-sequencing Analysis of Platelet Aggregation”*

Rehan Qayyum, MD, MHS, Clinical Professor of Medicine, UT College of
Medicine, Chattanooga; Director, Hospitalist Program, Erlanger Medical Center

3:50-4:00 Closing Remarks

4:00 – 4:15 Business Meeting

Posters

Characterization of the first known mutation of the human SLC12A2 (NKCC1) gene

Eric Delpire (1), Bianca Flores (1), Lynne Wolfe (2), and David Adams (2)

[1] Department of Anesthesiology, Vanderbilt University School of Medicine, *Nashville, TN, 37232*. [2] Undiagnosed Disease Program, NHGRI, Bethesda, MD, 20892.

Utilizing CRISPR to create single amino acid mutations in mice

Bianca Flores and Eric Delpire

Department of Anesthesiology, Vanderbilt University School of Medicine, *Nashville, TN, 37232*.

Are SPAK and OSR1 kinases transferred intercellularly via exosomes?

Rainelli Koumangoye and Eric Delpire

Department of Anesthesiology, Vanderbilt University School of Medicine, *Nashville, TN, 37232*.

The lipid synthesis enzyme, DGAT1, centrally regulates whole-body energy homeostasis

Carrie A. Grueter, Olivia Liem, Brad A. Grueter

Department of Anesthesiology, Vanderbilt University School of Medicine, *Nashville, TN, 37232*.

Dual mechanism responsible for focal energy deprivation in mice with a mutation in troponinT

Sabine Huke

Department of Pharmacology, Vanderbilt University School of Medicine, *Nashville, TN, 37232*

Pre- and Postnatal exposure to manganese induces dysregulation of glutamate transporter 1 (GLT-1) and adult neurogenesis via the transcription factor yin yang 1 (YY1) in mice

Keisha Smith

Departments of Neuroscience and Pharmacology, Meharry Medical College, *Nashville, TN 37208*

The effect of valproic acid (VPA) on behavioral and molecular changes induced by chronic exposure of manganese (Mn)

James A. Johnson, Jr., Keisha Smith, Eunsook Lee

Department of Neuroscience, Meharry Medical College, *Nashville, TN 37208*

ApoE3 protects against ABCA1 degradation through an Akt-dependent mechanism

Hong Yang

Department of Physiology, Meharry Medical College, *Nashville, TN 37208*

Differential regulation of endothelial nitric oxide synthase phosphorylation by protease-activated receptors in adult human endothelial cells

Lakeisha C. Tillery and Evangeline D. Motley-Johnson

Department of Microbiology and Immunology, Meharry Medical College, *Nashville, TN 37208*

High-density lipoprotein-mediated transcellular cholesterol transport in mouse aortic endothelial cells

LiXia Miao, Emmanuel U. Okoro, ZhiJan Cao, Hong Yang, Evangeline Motley-Johnson and Zhongman Guo

Department of Physiology, Meharry Medical College, *Nashville, TN 37208*

Potential for bacterial contamination as a result of dry needling

Henry Spratt¹, David Levine², Randy Walker², Robyn Tobias³, Heather Harmon², Brittany Rock², Zac Cooper², Dacey Winkleman¹

Departments of Biology, Geology, and Environmental Science¹, Physical Therapy², and School of Nursing³, University of Tennessee at Chattanooga, *Chattanooga, Tennessee*..

Fluorescence and UV-Vis Studies of Lysozyme Modifications Induced by Quinones

Charles Thomas, Jisook Kim, Titus Albu

Department of Chemistry, University of Tennessee at Chattanooga, *Chattanooga, Tennessee*.

Validating the Boer 3, 4 and 5 Aerobic Exercise Testing Protocols Against the Bruce Protocol

Nicholas Boer. Department of Health and Human Performance, University of Tennessee at Chattanooga, Chattanooga, Tennessee