

LAKE CUMBERLAND BIOLOGICAL TRANSPORT GROUP 2014

SUNDAY JUNE 8 – WEDNESDAY JUNE 11

CHAIR: Norma Adragna
VICE CHAIRS: Eric Delpire, Roger Worrell
CHAIR EMERITUS: Silvia Dossena

SUPPORTED BY:

Thermo
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Fisher Scientific

Department of Pharmacology and Toxicology



Boonshoft
School of Medicine
WRIGHT STATE UNIVERSITY

**Greetings and Registration
Sunday June 8th
Pumpkin Creek Lodge**

5:00 – 7:00 PM (Central Daylight Time)

Bring your family/colleagues and something to share
(Fruit, vegetables, cheese, dessert or entrée)

Beverages & table service will be provided



LAKE CUMBERLAND BIOLOGICAL TRANSPORT GROUP 2014
SESSION LOCATION: PUMPKIN CREEK LODGE

SUNDAY, JUNE 8

6:50 – 7:00 PM Welcoming Remarks: *Norma Adragna*

Session Chair: *Eric Delpire*

7:00 – 8:00 PM **Human Clostridium difficile infection**

Roger T. Worrell

Department of Molecular and Cellular Physiology, University of Cincinnati, Cincinnati, Ohio.

8:00 – 9:00 PM **Aldosterone activation of K secretion in colon of BK channel knockout mice.**

Dan Halm and Susan Halm

Department of Neuroscience, Cell Biology, and Physiology, Wright State University, Dayton, Ohio.

9:00 – 9:15 PM Break

Session Chair: *Norma Adragna*

9:15 10: 15 PM **Epinephrine Stimulation of CI Secretion in the Calu-3 Cell Line.**

Stephanie Flaig, Seth Winfree, Bonnie Blazer-Yost

Biology Department, Physics Department, Indiana University Purdue University Indianapolis

MONDAY, JUNE 9 (MORNING)

8:00 - 8:45 AM Breakfast (Pumpkin Creek Lodge)

Session Chair: *Roger Worrell*

8:45 – 9:45 AM **Effects of Media Glucose and Insulin Concentrations on Transepithelial Sodium Transport in a Distal nephron cell line.**

Ellen Maue, Stephanie Flaig, Bonnie Blazer-Yost

Biology Department, Indiana University Purdue University Indianapolis; Department of Cellular and Integrative Physiology, IU School of Medicine

9:45 – 10:45 AM **Renal Cystic Diseases: Current understanding of Inversin in Type II Nephronophthisis.**

Nalini Kulkarni and Bonnie Blazer-Yost

Biology Department, Physics Department, Indiana University Purdue University Indianapolis

10:45 – 11:00 AM Break

Session Chair: *Dan Halm*

11:00 – 12:00 AM **Phosphate and Possums and Proteomics, Oh My!**
Rebecca Murray, Syed J. Khundmiri, Michael L. Merchant, Barbara J. Clark, and Eleanor D. Lederer
Departments of Physiology & Biophysics, Medicine, Biochemistry & Molecular Biology, University of Louisville, Louisville, KY, Roley Rex VAMC, Louisville, KY.

12:15 PM **GROUP PHOTO: PUMPKIN CREEK LODGE**

5:00 – 6:30 PM **FAMILY DINNER: “THE LODGE” dining room**

MONDAY, JUNE 9 (EVENING)

Session Chair: *Bonnie Blazer-Yost*

6:30 – 7:30 PM **Identification of DNPEP, a cytosolic aminopeptidase that cleaves SPAK in the kidney.**
Nicolas Markadieu, Eric Delpire
Department of Anesthesiology, Vanderbilt University School of Medicine

7:30 – 8:30 PM **A Putative Model for K-Cl Cotransporter 3 (KCC3) in the control of K and Cell Volume Homeostasis in Double-Alanine Mutant HEK 293 Cells.**
Norma C. Adragna^{1,3}, Nagendra Ravilla^{1,3}, Kristopher Kahle⁴ and Peter Lauf¹⁻³
¹Cell Biophysics Group Departments of ²Pathology, and ³Pharmacology & Toxicology, Wright State University, Dayton, OH, and ⁴Department Neurosurgery, MGH/HMS, Boston, MA.

8:30 – 8:45 PM Break

Session Chair: *Rebecca Murray*

8:45 – 9:45 PM **Effect of carbon nanotubes on gramicidin channels in artificial lipid membranes.**
Pin (Tina) Li, Horia Petrache, Bonnie Blazer-Yost
Department of Biology, Indiana University-Purdue University at Indianapolis, IN

9:45 – 10:15 PM BUSINESS MEETING
TREASURER’S REPORT:
ELECTIONS:

TUESDAY, JUNE 10 (MORNING)

8:00 - 8:45 AM Breakfast (Pumpkin Creek Lodge)

Session Chair: *Norma Adragna*

8:45 – 9:45 AM **Apelin Regulation of K-Cl Cotransport is Dependent on Expected and Unexpected Physiological Factors**

*Norma Adragna*¹⁻², *Neelima Sharma*^{1-2,4} and *Peter Lauf*¹⁻³

¹Cell Biophysics Group, Departments of ²Pharmacology & Toxicology and ³Pathology, Boonshoft School of Medicine, and ⁴Biomedical Sciences Ph.D. Program, Wright State University, Dayton, OH.

9:45 – 10:45 AM **Does diet-induced obesity disrupt neuronal Cl-homeostasis in the hypothalamus?**

Kristen O'Connell, *Alana Smith*

Department of Physiology and Neuroscience Institute, University of Tennessee Health Science Center.

10:45 – 11:00 AM Break

Session Chair: *Roger Worrell*

11:00 – 12:00 AM **Canonical Bcl-2 Motifs Confer Sensor Role upon Na/K ATPase (NKA) for Bcl-2 Signaling of Cellular Functional State: Current Progress.**

*Peter K Lauf*¹⁻³, *Tariq alqahtani*^{1,3}, *Karin Flues*^{1,3} and *Norma C. Adragna*^{1,3}.

¹Cell Biophysics Group, Departments of ²Pathology and ³Pharmacology & Toxicology, Boonshoft School of Medicine, Wright State University, Dayton, OH.

TUESDAY, JUNE 10 (EVENING)

Session Chair: *James Clack*

6:30 – 7:30 PM **D1R regulation in Aging and spontaneous hypertension: Role of NHERF-1**

Syed Jalal Khundmiri^{1, 2,3}, *Eleanor D. Lederer*^{1,2,3}, *Utpal Sen*¹, *Amanda LeBlanc*¹, *Pedro Jose*⁴, and *Edward Weinman*⁴

¹Robley Rex Veterans Administration Medical Center, Louisville, KY, ²Department of Medicine, Kidney Disease Program, University of Louisville, Louisville, KY ³ Department of Physiology and Biophysics, University of Louisville, Louisville, KY, ⁴Department of Medicine, University of Maryland, Baltimore, MD.

7:30 – 8:30 PM

Endogenous Ouabain and AT1R: Co-conspirators of Hypertension?

Clayton D. Conner¹, Eleanor D. Lederer^{1,2,3} and Syed J. Khundmiri^{1,2,3}

¹Department of Physiology and Biophysics, University of Louisville, Louisville, KY,

²Department of Medicine, Kidney Disease Program, University of Louisville, Louisville, KY,

³Veterans Administration Medical Center, Louisville, KY

8:30 – 8:45 PM

Break

Session Chair:

Eric Delpire

8:45 – 9:45 PM

Are we there yet? NpT2a Forward Trafficking and NHERF1

Corey J. Ketchum¹, Syed J. Khundmiri^{1,2}, Barbara J. Clark³, Rebecca Murray¹ and Eleanor D. Lederer^{1,2,4}

Departments of ¹Physiology & Biophysics, ²Medicine, ³Biochemistry & Molecular Biology, University of Louisville, Louisville, KY, ⁴Robley Rex VAMC, Louisville, KY.

9:45 – 9:55: PM

CLOSING REMARKS:

Eric Delpire and Roger Worrell

FUTURE MEETINGS:

2015: Sunday June 21 – Tuesday June 23; Chairs: *E. Delpire* ____; Vice Chair: _____
& *R. Worrell*

2016: Sunday June 19 - Tuesday June 21; Chair: _____; Vice Chair: _____

2017: Sunday June 17 - Tuesday June 20; Chair: _____; Vice Chair: _____

