

# **2003 Lake Cumberland Biological Transport Meeting**

June 15-18, 2003

Lake Cumberland State Resort Park, Jamestown, Kentucky

*Affiliated with the American Physiological Society*

## **Greetings and Informal Reception**

**Sunday, June 15, 2003**

***Pumpkin Creek Lodge***

5:00-6:45 pm (**Central Time**)

Meet old friends and make new ones. Beverages will be provided.

**Bring your family!**

Please bring something to share (fruit, veggies, cheese, dessert or other dish).

**SUNDAY EVENING June 15,2003- SESSION 1**      **Moderator: Bruce Schultz**

- 7:00-7:10pm      *Opening remarks: Thomas Brown*
- 7:10-7:30      **Hans G. Folkesson.** Effect of cytokine release during intrauterine inflammation on preterm lung maturation with special emphasis on lung ion and fluid transport., Department of Physiology, Northeastern Ohio Universities College of Medicine, Rootstown, Ohio
- 7:30-7:40      *Discussion*
- 7:40:8:00      **Snezana Petrovic.** Solute Carrier 26 A7 in kidney, Division of Nephrology and Hypertension, University of Cincinnati Medical Center, Cincinnati, Ohio
- 8:00-8:10      *Discussion*
- 8:10-8:30      **Joshua M.V. Mammen, J. Cecilia Song, Peter S. Kim, Harold Davis, Karl S. Matlin, Jeffrey B. Matthews.** Ischemic Stress Induces Distinct Membrane and Cytoskeletal Targeting of PKCepsilon in Intestinal Epithelia Resulting in the Differential Activation of Substrates, Department of Department of Molecular and Cellular Physiology, University of Cincinnati, Cincinnati, Ohio
- 8:30-8:40      *Discussion*
- 8:40-8:50      *Coffee Break*
- 8:50-9:10      **Shigeo Tamiya.** L.Bozulic, N.A.Delamere. Regional distribution of Na,K-ATPase activity in the lens. Department of Ophthalmology & Visual Sciences, University of Louisville, Louisville, Kentucky
- 9:10-9:20      *Discussion*
- 9:20-9:40      **Gaspar Carrasquer.** Electrophysiological effects of ibuprofen on in-vitro membrane transport. Department of Medicine, Division of Nephrology, University of Louisville, Louisville, Kentucky
- 9:40-9:50      *Discussion*
- 9:50-10:10      **James W. Clack, Junyu Li, Mu Wang, and Frank A. Witzmann.** Post-translational Modifications of Retinal Transducin Beta Subunit. Department of Biology, School of Science and Departments of Cellular & Integrative Physiology and Biochemistry & Molecular Biology, Indiana University School of Medicine, IUPUI, Indianapolis, Indiana
- 10:10-10:20      *Discussion*

**MONDAY MORNING - SESSION 2      *Moderator: Hans Folkesson***

9:00-9:20am    **Dan Halm.** Localization of K channels in the colonic mucosa. Department of Physiology and Biophysics, Wright State University, Dayton, Ohio

9:20-9:30      *Discussion*

9:30-9:50      **M. Soleimani, S. Petrovic, S. Barone, Z. Wang, J. Xu and L. Ma.**  
Bicarbonate transporters in the stomach. Department of Medicine, Division of Nephrology and Hypertension, University of Cincinnati, Cincinnati, Ohio

9:50-10:00    *Discussion*

10:00-10:20      *Coffee Break*

10:20-10:40    **Roger Worrel.** Colonic ion transport: Implications of ammonium. Department of Surgery, University of Cincinnati College of Medicine, Cincinnati, Ohio

10:40-10:50    *Discussion*

10:50-11:10    **Rebecca Quesnell and Bruce Schultz.** Glucocorticoids concentration- and time-dependently upregulate amiloride-sensitive ion transport across vas deferens. Department of Anatomy and Physiology, Kansas State University, College of Veterinary Medicine, Manhattan, Kansas

11:10-11:20    *Discussion*

**MONDAY EVENING - SESSION 3**      **Moderator: Nicholas Delamere**

- 7:30-7:50pm      **Aidar R. Gosmanov** and Donald B. Thomason. ATP-sensitive K-channels mediate hyperosmotic stimulation of NKCC in slow-twitch skeletal muscle. Department of Physiology, University of Tennessee, Memphis, Tennessee
- 7:50-8:00      *Discussion*
- 8:00-8:20      **Norma C. Adragna**, J. Zhang, Y. Chen, M. Morris, E. Delpire and P.K. Lauf. Characteristics of K-Cl cotransport in vascular smooth muscle cells and hypertension. Departments of Pharmacology and Toxicology, and Physiology and Biophysics, Wright State University, Dayton, OH and Department of Anesthesiology, Vanderbilt University, Nashville, Tennessee
- 8:20-8:30      *Discussion*
- 8:30-8:50      **Nellie Byun** and Eric Delpire, A role for KCC3 in Schwann cell development? Neuroscience Graduate Program and Department of Anesthesiology, Vanderbilt University, Nashville, Tennessee
- 8:50-9:00      *Discussion*
- 9:00-9:20      **Kenneth B.E. Gagnon**, Robert E.W. Fyffe, Norma C. Adragna, and Peter K. Lauf . Functional properties of the K-Cl cotransporter in a fibrous astrocyte in vitro model - rat C6 glioblastoma cell. Departments of Physiology & Biophysics, Anatomy, Pharmacology & Toxicology & Center for Brain Research, Wright State University, Dayton, Ohio
- 9:20-9:30      *Discussion*
- 9:30-10:00      Business Meeting-All meeting participants are encouraged to attend**

**TUESDAY MORNING - SESSION 4     Moderator: Donald Thomason**

- 9:00-9:20am     **Eric Delpire**, Could cation-chloride cotransporters function as stress sensors? Department of Anesthesiology, Vanderbilt University, Nashville, Tennessee
- 9:20-9:30     *Discussion*
- 9:30-9:50     **Ernest F. Talarico**, Brian G. Kennedy, Carl F. Marfurt, Nancy J. Mangini. Plasma Membrane Calcium - ATPase (PMCA) Pump Isoforms in Corneal Epithelium. Departments of Anatomy & Cell Biology and Physiology & Biophysics, Indiana University, Northwest Center for Medical Education, Gary, Indiana
- 9:50-10:00     *Discussion*
- 10:00-10:20     *Coffee Break*
- 10:20-10:40     **Nicholas A. Delamere**. Studies on calcium signaling responses following partial Na, K-ATPase inhibition. Department of Ophthalmology and Visual Sciences, University of Louisville, Louisville, Kentucky
- 10:40-10:50     *Discussion*
- 10:50-11:10     **Michele G Wheatly** and Y. Gao. Epithelial calcium channels and crayfish moulting. Wright State University, Department of Biological Sciences, Dayton, Ohio
- 11:10-11:20     *Discussion*
- 11:20-11:40     **Thomas L. Brown**, Amy D. Gultice, Meredith A. Reedy and Tina Caserta. Q-VD-OPh, a novel broad spectrum caspase inhibitor with potent antiapoptotic properties. Department of Physiology and Biophysics, Wright State University, Dayton, Ohio

11:40-11:50

*Discussion*

**TUESDAY EVENING, June 17<sup>th</sup>**  
**5:30-7:00pm Family Barbecue**  
**On the Activity Center Patio by Lure Lodge**

**TUESDAY EVENING –SESSION 5      Moderator: Eric Delpire**

7:30-7:50pm

**John Cuppoletti** and Danuta H. Malinowska. Studies on airway epithelial ClC-2 chloride channels. Department of Molecular and Cellular Physiology, University of Cincinnati, Cincinnati, Ohio

7:50-8:00

*Discussion*

8:00-8:20

**Zi-Jian Xie**, Jian Tian, Ting Cai, and Mike Haas. Src interaction with sodium pump as a paradigm for studying the signaling function of membrane transporters., Department of Pharmacology and Medicine, Medical College of Ohio, Toledo, Ohio

8:20-8:30

*Discussion*

8:30-8:50

*Coffee Break*

8:50-9:10

**Nicole J. Garbarini** and Eric Delpire, Investigating novel protein interactions with KCC2. Neuroscience Graduate Program and Department of Anesthesiology, Vanderbilt University, Nashville, Tennessee

9:10-9:20

*Discussion*

9:20-9:40

**Bruce Schultz.** Mifepristone modulates anion transport mechanisms in vas deferens epithelial monolayers. Department of Anatomy and Physiology, Kansas State University, College of Veterinary Medicine, Manhattan, Kansas

9:40-9:50

*Discussion*

9:50

Final Remarks