

**Monday, March 2, 2009**

**12:00 noon**

**Blue Bird Auditorium, NB-137, Neurosensory Center**

## **Axonal ion channels and epilepsy: from new genes to new therapies**

**Edward Cooper, MD**

**Assistant Professor of Neurology  
University of Pennsylvania**

### **Objectives:**

At the end of this presentation, participants should be able to:

- Review ion channel mechanism underlying excitability and epilepsy;
- Understand clinical phenotypes of inherited potassium channel disorders;
- Learn the most recent strategies in channel-specific therapy of neonatal epilepsies

### **References:**

- Cooper EC and Jan LY. M-channels: neurological diseases, neuromodulation, and drug development. *Arch Neurol.* 2003 Apr;60(4):496-500.
- Pan, Z, Kao, T., Horvath, Z, Lemos, J, Sul, J-Y, Cranstoun, SD, Bennett, MV, Scherer, SS and Cooper, EC. A common ankyrin-G-based mechanism retains KCNQ and Nav channels at electrically active domains of the axon. *J. Neurosci.* 2006, 26:2599–2613.
- Cooper, EC. Channel mutations in epilepsy: a neurodevelopmental perspective. *In: Pediatric Epilepsy: Diagnosis and Therapy, 2<sup>nd</sup> ed.* Pellock, Dodson, Bourgeois, Nordli, and Sankar, eds. Demos Medical Publishing, New York, 2007.
- Raol, YH, Lapedes, DA, Keating, JG, Brooks-Kayal, AR, and Cooper, EC. A KCNQ channel opener for experimental neonatal seizures and status epilepticus. *Annals of Neurology*, 2009 (in press)

### **Target Audience, Needs, Educational Methods, Activity Evaluation:**

Physicians, residents, fellows, and other healthcare professionals need to be updated about new advances in the clinical and research areas for the diagnosis, treatment, and management of patients with neurological disorders. Educational methods will include lectures, case presentations, audio/video presentations, and questions & answer sessions. Participants will be asked to complete an activity evaluation.

### **Accreditation/Credit Designation**

Baylor College of Medicine is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians. Physicians should only claim credit commensurate with the extent of their participation in the activity.