

PHYSIOLOGY &  
MEMBRANE BIOLOGY  
SCHOOL OF MEDICINE

## IN-HOUSE SEMINAR SERIES

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Institute for Pediatric Regenerative Medicine  
Shriners Hospital for Children

### “Acid-sensing Ion Channels in Oligodendrocyte Lineage Cells”

Acid-sensing ion channels (ASICs) comprise a family of ligand-gated cation channels that are gated by protons, and thereby respond to changes of the extracellular pH. ASICs are widely distributed in central and peripheral neurons where they serve roles in pain sensation, mechanosensation, learning and memory, fear, and neuronal injury in stroke and neuroinflammation. I have recently shown that oligodendrocyte lineage cells (OLC) also express functional ASICs. OLC give rise to myelin in the central nervous system, and are vulnerable to injury, resulting in demyelinating diseases including multiple sclerosis. ASICs in OLC respond to small shifts of pH by producing depolarization and elevation of intracellular free calcium concentration, and through these mechanisms may contribute to both normal and pathological processes in OLC.

**FRIDAY, September 26, 2008**

**4:00 PM**

**TUPPER HALL ROOMS 2419A & 2419B**

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