

## 2009 ASIA Pre-Course

### *Neural Plasticity in SCI: The “Black Box” of Neurophysiology in Disability and Recovery*

#### **Co-Chairs:**

Keith Tansey, MD, PhD, Deborah Backus, PhD, PT, and John Steeves, PhD

#### **Overall Objective:**

To develop improved understanding and communication of the challenges and advances being forged scientifically and clinically in SCI rehabilitation and research, as well as to improve translational opportunities involving both scientists and clinicians.

#### **Course Objectives:**

- To foster dialogue between clinicians and researchers, especially in the area of neural plasticity in spinal cord injury
- To integrate new ASIA members from the scientific and clinical research spheres

#### **Target Audience:**

- Physiatrists, neurologists, neurosurgeons, spinal cord physiologists, biomedical engineers, physical therapists, occupational therapists, SCI research program directors, or other members of the interdisciplinary team involved in basic science or clinical research in spinal cord injury;
- Physicians, therapists, or other members of the interdisciplinary team involved in the care of individuals with spinal cord injury, and who want to translate current evidence regarding neural plasticity after spinal cord injury into effective clinical practice.

**Contact Hours:** TBD

<b>Time Frame</b>	<b>Core Topics</b>	<b>Speaker</b>
8:30-8:45 AM	<b>Course Introduction and Objectives</b>	Deborah Backus, PhD, PT, Shepherd Center/Emory University
8:45-9:25 AM	<b>Neural Repair in SCI:</b> 1) Scientists' Strategies 2) Clinicians' Trials 3) The Missing Piece	Keith Tansey, MD, PhD, Shepherd Center/Emory University
9:30-10:10 AM	<b>The Human Neurophysiology of Motor Control in Spinal Cord Injury</b>	Art Sherwood, PhD, NIDDR
10:15-10:30AM	<b>Break</b>	
10:30-11:10AM	<b>Recovery of Locomotion in SCI: Clinical Experience with Robots and Therapists</b>	George Hornby, PT, PhD, Rehabilitation Institute of Chicago
11:15-11:55AM	<b>Mechanisms of Locomotor Recovery in Rats vs Men: Localizing Neural Plasticity in SCI</b>	Keith Tansey, MD, PhD, Shepherd Center/Emory

		University
12:00-1:00 PM	<b>Lunch on your own</b>	
1:00-1:40 PM	<b>Sensory Neural Plasticity following Spinal Cord Injury</b>	Matt Ramer, PhD, ICORD
1:45-2:25 PM	<b>Pharmacological Plasticity in SCI: Molecules for Spasticity, Locomotion and Pain</b>	Shawn Hochman, PhD, Emory University
2:30-2:45 PM	<b>Break</b>	
2:45-3:25 PM	<b>Recovery of Reaching and Grasping in SCI: Sensory Modulation, Surgery and Robots</b>	Deborah Backus, PhD, PT, Shepherd Center/Emory University
3:30-4:10 PM	<b>Neurosurgery in SCI: Deafferentation and the Lower Motoneuron in Cervical SCI</b>	Justin Brown, MD, Washington University
4:15-4:45 PM	<b>Open Discussion with Speakers Panel</b>	John Steeves, PhD, Panel Chair
4:45-5:00 PM	<b>Course Summary and Concluding Remarks</b>	John Steeves, PhD, ICORD