

14th International Symposium on Neural Regeneration
Scientific Program

Wednesday – December 7, 2011

- 3:00 PM** Arrival of participants and check-in
- 6:00 PM** DINNER
- 7:30 PM** Welcome and Keynote Address

Keynote Speaker: Mark Tuszynski (Univ. of California, San Diego and San Diego VAMC)
“Combinatorial Strategies for Regeneration After Spinal Cord Injury”

Thursday – December 8, 2011

Session 1 (8:15 am) Title: Brain Machine Interface (BMI)

Chair: Doug Weber (Univ. of Pittsburgh and Pittsburgh VAMC)

Speaker 1: Andrea Kubler (Univ. of Wurzburg – Germany)

“Out of the frying pan into the fire – BCI faces real world application”

Speaker 2: Bradley Greger (Univ. of Utah)

“Micro-electrodes in and on the cerebral cortex for decoding and encoding information”

Speaker 3: Chet Moritz (Univ. of Washington)

“Leveraging neural plasticity for the treatment of paralysis and other movement disorders”

Speaker 4: Jennifer Collinger (Univ. of Pittsburgh and Pittsburgh VAMC)

“Is BCI technology ready for prime time? The science is mature and the consumers are willing - what are we waiting for?”

Featured Speaker (1) (11:00 AM): Hunter Peckham (Case Western Reserve University and Cleveland VAMC)

“The Role of Neural Prosthesis and Neural Stimulation In the Restoration Function”

Featured Speaker (2) (1:00 PM): Colin McCaig (University of Aberdeen)

“Regulating neural cell behaviour with extracellular electrical signals”

Session (2) (7:15 PM): Debate–The future of functional recovery is robotics not regeneration

Moderator: Dave Shine (Baylor College of Medicine and Houston VAMC)

Affirmative:

1. Vivian Mushahwar (Univ. of Alberta)
2. Chet Moritz (Univ. of Washington)
3. Doug Weber (Univ. of Pittsburgh and Pittsburgh VAMC)
4. Alan Harvey (Univ. of Western Australia)

Negative:

1. Hunter Peckham (Case Western Reserve University and Cleveland VAMC)
2. Linda Noble (UCSF)
3. Jerry Silver (Case Western Reserve University)
4. Arthur Prochazka (Univ. of Alberta)

Friday – December 9, 2011

Session 3 (8:15 AM) Title: Stem Cells – The promises and challenges

Chair: Itzhak Fischer (Drexel University) -

Speaker 9: Frank Laferla (Univ. of California, Irvine)

“Neural Stem Cells as a Treatment for Alzheimer’s Disease”

Speaker 10: Itzhak Fischer (Drexel University)

Speaker 11: Nicholas Maragakis (Johns Hopkins School of Medicine)

“Scientific and Clinical Challenges in using Stem Cells for Investigating and Treating Amyotrophic Lateral Sclerosis”

Speaker 12: Gary Steinberg (Stanford)

“Neural Stem Cell Therapy for Stroke: Underlying Mechanisms and Clinical Translation”

Featured Speaker (3) (11:00 AM): Dwight Bergles (Johns Hopkins School of Medicine)

(General Area: Neuronal and glial communication) *“Fate and function of glial progenitors in the mammalian CNS”*

Featured Speaker (4) (1:00 PM): Stefan Heller (Stanford)

(General Area: Stem cells in otolaryngology) *“Inner ear sensory hair cells from stem cells”*

Session 4 (7:15-9:00PM) Title: Translational Approaches – “Lost in Translation”

Chair: Naomi Kleitman (NIH/NINDS)

Speaker 5: Naomi Kleitman

“Implications Of Replications: Improving The Quality Of Preclinical Research”

Speaker 6: David Howells (Univ. of Melbourne)

“Avoiding bias at the bench”

Speaker 7: Dan Lammertse (Craig Hospital/Univ. of Colorado – Denver)

“The Challenges of Translation: A Clinical Perspective”

Speaker 8: Jan Nolte (Univ. of California, Davis)

“Working toward cellular therapies to treat Huntington’s disease”

Saturday – December 10, 2011

Session (5) (8:15 AM): Title: ISN Symposium on Neurochemistry and Neurobiology of Repair

Chair: Jacqueline Bresnahan (Univ. of California, San Francisco)

Speaker 13: Klaus Nave (Max Planck Institute for Experimental Medicine – Germany)

“The role of myelinating glia in preserving axon function”

Speaker 14: Herb Geller (NIH/NHLBI)

“The Sour Side of Sugars: Chondroitin Sulfate Signaling in Axonal Guidance”

Speaker 15: Roman Giger (Univ. of Michigan)

“Identification and functional characterization of novel receptors for inhibitory chondroitin sulfate proteoglycans.”

Speaker 16: Linda Noble (Univ. of California, San Francisco)

“Matrix metalloproteinases as modifiers of injury and recovery processes after spinal cord injury”

Featured Speaker 5 (11:00 AM): Ed Boyden (Massachusetts Institute of Technology)

(General Area: Optogenetics) *“Optogenetics: Tools for Controlling Brain Circuits With Light”*

Session 6 (4:15 PM – 6:00 PM): Route 28 Summit Presentations – Novel ways to exploit stem cells for recovery of CNS function.

Symposium Summary