

# MOLECULAR AND CELLULAR MECHANISMS OF AXON DEGENERATION: 2<sup>nd</sup> International Workshop

Marine Biological Laboratory, Woods Hole, MA, USA  
October 26-28, 2008

## PROGRAM

### Sunday 26<sup>th</sup> October 2008

- |             |   |
|-------------|---|
| 14.00-17.00 | Registration, room check-in, posters up |
| 17.00-18.00 | Mixer                                   |
| 18.00-19.15 | Dinner                                  |

### **Session 1: Wallerian degeneration and axon protection (1)** **chair: Zhigang He**

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|-------------|---|
| 19.20       | Introduction  |
| 19.30       | <b>Michael Coleman (Babraham Institute, Cambridge, UK):<br/>Dissecting the regulation of axon degeneration using<br/>transgenic mice and rats</b> |
| 20.00       | <b>Marc Freeman (UMass Med School, Worcester):</b>  |
| 20.30       | <b>Jeff Milbrandt (Washington University, St. Louis): Axonal<br/>degeneration: mitochondria, energy and redox</b>                                 |
| 21.00-23.00 | Evening mixer   |

Monday 27<sup>th</sup> October 2008

7.30-8.30 Breakfast

**Session 2: Wallerian degeneration and axon protection (2)**

chair: **Marc Freeman**

9.00 Tom Gillingwater (University of Edinburgh): A 'molecular fingerprint' for altered axonal and synaptic vulnerability?

9.30 Lucy Broom (University of Southampton): Axoplasm proteomics: early events in axon degeneration and potential effectors of Wld<sup>S</sup>

10.00-10.30 Coffee

10.30 Marc Tessier-Lavigne (Genentech): Axonal self-destruction and neurodegenerative disease

11.00 Ryan Watts (Genentech): Signaling pathways regulating axon degeneration

11.30 Zhigang He (Children's Hospital, Boston):

12.00-14.00 Lunch & free time

**Session 3: Axons in Alzheimer's disease and tauopathies**

chair: **Larry Goldstein**

14.00 Erika Holzbaur (University of Pennsylvania, Philadelphia):

14.30 Eva-Maria Mandelkow (Max-Planck Unit for Structural Molecular Biology, Hamburg): Tau protein: Role in axonal transport, neurite outgrowth, and neurodegeneration

15.00 Larry Goldstein (UCSD, La Jolla): Elucidating mechanisms of vesicle movement and human neurodegenerative diseases

15.30 Bradley Hyman (Mass General, Charlestown): Calcineurin activation mediates morphological neurodegenerative changes of Alzheimer's disease

16.00-18.00 Poster session and mixer

18.00-19.00 Dinner

**Session 4: Neuron-glia interactions in development and disease**  
chair: Jack Griffin

19.00 Klaus-Armin Nave (Max-Planck Institute for Experimental Medicine, Göttingen):

19.30 Ben Barres (Stanford University): The Calcium Channel Subunit  $\alpha 2\delta 1$  is the Neuronal Thrombospondin Receptor Responsible for Synaptogenesis.

20.00 Jack Griffin (Johns Hopkins University, Baltimore):

20.30 Simon John (The Jackson Laboratory, Bar Harbor): Glaucoma as an axonopathy

21.00-23.00 Evening mixer

**Tuesday 28<sup>th</sup> October 2008**

7.00-8.15 Breakfast

**Session 5: Mitochondria in axon growth and stability**  
chair: Michael Coleman

8.30 Stephan Zuchner (University of Miami):

9.00 Zu-Hang Sheng (NINDS, Bethesda): Control of axonal mitochondrial mobility and its impact on short-term facilitation

- 9.30 Thomas Misgeld (Technical University of Munich): *Cell biological mechanisms of developmental neuromuscular axon loss*
- 10.00 Zhenyu Yue (Mount Sinai School of Medicine, NY): *Neuronal Autophagy: Going the Distance to the Axon*
- 10.30-11.00 Coffee

**Session 6: Axon degeneration in neurodegenerative disease  
chair: Ben Barres**

- 11.00 Ahmet Hoke (Johns Hopkins University, Baltimore):
- 11.30 Christine Beattie (Ohio State University, Columbus): *Motoneuron diseases and the distal axon*
- 12.00 Martin Kerschensteiner (Ludwig-Maximilians University, Munich): *In vivo* pathogenesis of immune-mediated axon damage
- 12.30 Lunch & depart