



Join Keystone Symposia
for the 2016 conference on:

Neurological Disorders of Intracellular Trafficking

January 31–February 4, 2016

Keystone Resort | Keystone, Colorado | USA

Scientific Organizers:

Dennis Drayna and Bettina Winckler

Deficits in intracellular trafficking are a newly emerging, unifying theme in a broad range of neurological disorders, including Alzheimer's Disease, Huntington's Disease, Parkinson's Disease and many others. Specific treatments for these disorders are either limited or unavailable. The meeting will look at how these trafficking deficits produce neuropathology, why these disorders are limited to the nervous system and how to elucidate trafficking networks and control points to identify novel drug targets. For the first time, the meeting will bring together groups that have traditionally not interacted, including cell biologists who study trafficking but have predominantly studied non-neural cells, clinical neurologists who do not typically work in cell biology, geneticists who have discovered causative genes for a wide range of neurological disorders but typically have limited expertise in the biological function of the gene products they identify, and drug developers, to cross-fertilize ideas and generate new collaborations.

Session Topics:

- Genetics: Multigenic Neurologic Disorders
- Genetics: Lessons from Single Genes in Neurologic Disorders
- The Biology of Intracellular Trafficking
- Intracellular Trafficking in Neurological Diseases
- Neurobiology of Intracellular Trafficking
- Clinical Neurology and Trafficking Disorders I & II
- Translational Research Opportunities in Neuronal Trafficking Disorders



Submitting an abstract is a great way of participating in the conference through poster presentation and possible selection for a short talk.

Scholarship & Discounted Abstract Deadline: **Sep 30, 2015**

Abstract Deadline: **Nov 2, 2015**

Discounted Registration Deadline: **Dec 1, 2015**

For additional details, visit www.keystonesymposia.org/16A7.

KEYSTONE SYMPOSIA™
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SUNDAY, JANUARY 31

Arrival and Registration

MONDAY, FEBRUARY 1

Welcome and Keynote Address

***Dennis Drayna**, NIDCD, National Institutes of Health, USA

Scott D. Emr, Cornell University, USA

Sorting Out Traffic in the Secretory and Endocytic Pathways: Yeast Genetics Points the Way

Genetics: Multigenic Neurologic Disorders

***Dennis Drayna**, NIDCD, National Institutes of Health, USA

Lian Li, Emory University School of Medicine, USA

SIMPLE Mutations, Endosomal Trafficking, and Peripheral Neuropathy

Matthew J. Farrer, University of British Columbia, Canada

Genetics of Parkinson's Disease and Other Movement Disorders

Shaoyu Lin, University of Southern California, USA

Short Talk: Haploinsufficiency for Guanine Exchange Factor Activity Leads to Neurodegeneration in C9ORF72 ALS/FTD

Genetics: Lessons from Single Genes in Neurologic Disorders

***Craig D. Blackstone**, NINDS, National Institutes of Health, USA

Dennis Drayna, NIDCD, National Institutes of Health, USA

Intracellular Trafficking Mutations in Persistent Stuttering

Rose E. Goodchild, VIB/ KU Leuven, Belgium

The DYT1 Dystonia Protein, TorsinA, Promotes Membrane Biogenesis

Stéphane Lefrançois, INRS, Canada

CLN5 Regulates the CLN3-Rab7 Interaction by Modulating CLN3 Conformation

Rachel J. Allison, Cambridge Institute for Medical Research, UK

Short Talk: Spastin Controls Lysosome Function by Promoting ER-Mediated Endosomal Tubule Fission

Poster Session 1

TUESDAY, FEBRUARY 2

The Biology of Intracellular Trafficking

***Scott D. Emr**, Cornell University, USA

Jennifer Hirst, University of Cambridge, UK

The AP-5 Adaptor Protein Complex and Hereditary Spastic Paraplegia

Mark von Zastrow, University of California, San Francisco, USA

GPCR Signaling and Endocytic Pathways

Phyllis I. Hanson, Washington University School of Medicine, USA

Short Talk: ESCRT-III in Endosomal Trafficking

Bettina Winckler, University of Virginia, USA

Neuronal Endosomes in Health and Disease

Rui Dong, Yale University / HHMI, USA

Short Talk: The Impact on Intracellular Trafficking of VAP, a Protein Implicated in a Familial Form of Amyotrophic Lateral Sclerosis

George S. Bloom, University of Virginia, USA

Short Talk: mTOR and Neuronal Cell Cycle Re-Entry: How Insulin Resistance Promotes Alzheimer's Disease

Intracellular Trafficking in Neurological Diseases

***Ellen Sidransky**, NHGRI, National Institutes of Health, USA

Shawn Ferguson, Yale University, USA

Axonal Lysosome Transport and Maturation Defects in Alzheimer's Disease

Luigi Puglielli, University of Wisconsin-Madison, USA

Increased Expression of AT-1/SLC33A1 Causes Autism by Destabilizing the Secretory Pathway

Rohan Teasdale, University of Queensland, Australia

Parkinson's-Associated VPS35 Mutations Alter Retromer Cellular Functions

Destiney Buelto, University of Michigan, USA

Short Talk: Unique Role of the Yeast ArfGAP Age2 in Clathrin-Dependent Endosomal Trafficking

Elin K. Esbjörner, Chalmers University of Technology, Sweden

Short Talk: Multidimensional Microscopy Approaches to Capture Protein Misfolding Reactions Related to Vesicular Trafficking Organelles and Alzheimer's Disease

Poster Session 2

WEDNESDAY, FEBRUARY 3

Neurobiology of Intracellular Trafficking

***Shawn Ferguson**, Yale University, USA

Mary McCaffrey, University College Cork, Ireland

The Importance of Rab11, Rab14, the Rab11-FIPs and Endosomal Recycling in Neuronal Processes

Jose A. Esteban, Centro de Biología Molecular Severo Ochoa, Spain

PIP3 Signaling and AMPA Receptor Trafficking During Synaptic Plasticity

Ulrich Hengst, Columbia University, USA

Regulation of Retrograde Transport in Axons through Local Synthesis of Dynein Adaptor Proteins

Tija Jacob, University of Pittsburgh School of Medicine, USA

Synaptic Tethering of alpha 5 GABA A Receptors Regulates Dendrite Outgrowth and Maturation

Adam Oaks, George Washington University, USA

Short Talk: Cc2d1a Regulates Intracellular Trafficking and Signaling in Neurons

Cameron Day, University of Utah, USA

Short Talk: Adaptation of Viral Trafficking for Arc-Mediated Synaptic Plasticity

Clinical Neurology and Trafficking Disorders I

***Ray Truant**, McMaster University, Canada

Eric M. Morrow, Brown University, USA

Cellular Mechanisms in Christianson Syndrome, a Novel Endosomal Disorder

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Craig D. Blackstone, NINDS, National Institutes of Health, USA

ER Shaping Proteins and Hereditary Spastic Paraplegias

Zbigniew K. Wszolek, Mayo Clinic College of Medicine, USA

Perry Syndrome

Michael D. Ehlers, Biogen, USA

Impaired Beta-Arrestin Recruitment and Reduced Desensitization by Non-Catechol Agonism of the D1 Dopamine Receptor

THURSDAY, FEBRUARY 4

Clinical Neurology and Trafficking Disorders II

***Dennis Drayna**, NIDCD, National Institutes of Health, USA

Patrick A. Lewis, University of Reading, UK

Regulation of Macroautophagy by Leucine Rich Repeat Kinase 2

Juliane Winkelmann, Helmholtz Zentrum München, Germany

Genetics of Restless Legs Syndrome and other Movement Disorders

Ellen Sidransky, NHGRI, National Institutes of Health, USA

Parkinson's Disease and Lysosomal Storage Disorders

Patrizia Casaccia, Advanced Science Research Center, USA

Inhibitors of Nuclear Transport as Potential Therapeutic Targets for Axonal Damage in Inflammatory Demyelination

Kevin Luethy, KU Leuven, Belgium

Short Talk: Arf6 Blocks Synaptic Vesicle Transport to the Endosome and Suppresses Sky/TBC1D24, a Protein Mutated in Epilepsy

Translational Research Opportunities in Neuronal Trafficking Disorders

***Tija Jacob**, University of Pittsburgh School of Medicine, USA

Willem Annaert, KU Leuven, Belgium

Biological Relevance of gamma-Secretase Heterogeneity in Alzheimer's Disease – An Alternative Avenue for Therapeutic Intervention?

Michael Lee, University of Minnesota, USA

p53-Dependent Regulation of Autophagy by c-Abl in Parkinson's Disease

Ray Truant, McMaster University, Canada

Huntingtin Trafficking in Response to ROS and DNA Damage Leads to a Therapeutic Lead for Huntington's Disease

Meeting Wrap-Up: Outcomes and Future Directions (Organizers)

FRIDAY, FEBRUARY 5

Departure