

# KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

## Neuronal Cell Biology: A Biology of Extremes (A1)

January 23-26, 2021 • Hilton Santa Fe Historic Plaza Hotel • Santa Fe, NM, USA

Scientific Organizers: Timothy A. Ryan and Erin M. Schuman

Supported by the Directors' Fund

Scholarship Deadline: October 6, 2020 / Abstract Deadline: October 20, 2020 / Discounted Registration Deadline: November 20, 2020

### SATURDAY, JANUARY 23

#### Arrival and Registration

### SUNDAY, JANUARY 24

#### Welcome and Keynote Address

**Pietro V. De Camilli**, Yale University School of Medicine, USA  
*Liquid Protein Phases that Control Synaptic Vesicle Pools*

#### Supplying Proteins to Dendrites and Axons

**Erin M. Schuman**, Max-Planck-Institut für Hirnforschung, Germany  
*Local Protein Synthesis in Synapses*

**Kelsey C. Martin**, University of California, Los Angeles, USA  
*Regulating Gene Expression to Store Long-Term Memories*

**Juan S. Bonifacino**, National Institutes of Health, USA  
*Polarized Sorting of Somatodendritic and Axonal Proteins*

#### Short Talks Chosen from Abstracts

#### Local Protein Destruction: Taking Out the Trash

**Monica Driscoll**, Rutgers University, USA  
*Novel Pathways for Clearing Neuronal Debris*

**Catherine Collins**, University of Michigan, USA  
*Control of Axon Protein Levels*

**Erika L. F. Holzbaur**, University of Pennsylvania, USA  
*Autophagy and Mitophagy in Neurons*

#### Short Talks Chosen from Abstracts

#### Poster Session 1

### MONDAY, JANUARY 25

#### Metabolic Rules in Neurons

**Timothy A. Ryan**, Weill Medical College of Cornell University, USA  
*New Rules of Synaptic Metabolism*

**Daniel Alfonso Colón-Ramos**, Yale School of Medicine, USA  
*A Local Metabolon Supports Synapse Function*

**Heidi M. McBride**, McGill University, Canada  
*Mitochondrial Signaling in Health and Disease*

**Gulcin Pekkurnaz**, University of California, San Diego, USA  
*Metabolic and Mitochondrial Plasticity in Neurons*

#### Short Talks Chosen from Abstracts

#### Axon Survival

**Aaron DiAntonio**, Washington University in St. Louis, USA  
*Axon Degeneration and How to Avoid It*

**Marc Hammarlund**, Yale University School of Medicine, USA  
*Programmed Axon Survival*

**Yishi Jin**, University of California, San Diego, USA  
*Neuronal Circuit Remodeling*

#### Short Talks Chosen from Abstracts

#### Poster Session 2

### TUESDAY, JANUARY 26

#### New Optical Technologies for Cracking Cell Biological Questions

**James Zhe Liu**, Janelia Research Campus, USA  
*Tagging and Tracking Endogenous Proteins in Neurons*

**Erik M. Jorgensen**, University of Utah, USA  
*Frontiers in Correlative EM and Light Microscopy*

**Jennifer A. Lippincott-Schwartz**, Howard Hughes Medical Institute - Janelia Farm, USA  
*New Microscopies for Peering Inside Neurons*

**Speaker to be Announced**

#### Short Talks Chosen from Abstracts

#### Novel Microtubule Biology in Neurons

**Antonina Roll-Mecak**, NINDS, National Institutes of Health, USA  
*The Tubulin Code: How Cells Build Asymmetry into their Microtubule Arrays*

**Casper Hoogenraad**, Genentech, Inc., USA  
*Cytoskeleton Remodeling and Neuronal Polarity*

**Kang Shen**, Stanford University, USA  
*Microtubule Organization in Neurons*

#### Short Talks Chosen from Abstracts

#### Lipid Homeostasis in Neuron and Neuronal Disease

**Gilbert Di Paolo**, Denali Therapeutics Inc., USA  
*Control of Microglial Lipid Metabolism by TREM2 and APOE*

**Thomas Clandinin**, Stanford University, USA  
*Lipid Synthesis and Synaptic Vesicle Pools*

**Yasunori Saheki**, Lee Kong Chian School of Medicine, Singapore  
*Lipid Shuttling between Organelles via SMP Containing Proteins*

#### Short Talks Chosen from Abstracts

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

### WEDNESDAY, JANUARY 27

#### Departure