

SYMPOSIA AND MINISYMPOSIA



THEME A: DEVELOPMENT

Minisymposium

Adult Hippocampal Neurogenesis in Humans and Rodents: New Evidence and New Perspectives **CME**

Chair: Juan Song, PhD

Co-Chair: Shaoyu Ge, PhD

Symposium

Circuit Variability and Plasticity in the Central Nervous System of *Drosophila* **CME**

Chair: Gaia Tavasani, PhD

Co-Chair: Bassem A. Hassan, PhD

Symposium

From Single-Cell Profiling to Human Brain Organoids: Capturing Neural Development and Disease **CME**

Chair: Sergiu P. Pasca, MD

Co-Chair: Hongjun Song, PhD

Minisymposium

Functional Maturation of Cerebello-Cerebral Interactions **CME**

Chair: Freek E. Hoebeek, PhD

Co-Chair: Roy V. Sillitoe, PhD

Minisymposium

Mechanisms of Basal Ganglia Maturation: Insights Into Health and Disease **CME**

Chair: Rui Peixoto, PhD

Co-Chair: Ori Lieberman

Minisymposium

New Insights in Understanding Fragile X Syndrome (FXS): Focus on Neural Development in Human Models and Non-Neuron Glial Cells **CME**

Chair: Yongjie Yang, PhD

Co-Chair: Gary J. Bassell, PhD

Minisymposium

Novel Mechanisms of Neuronal Alternative Splicing and Strategies to Correct Aberrant-Splicing **CME**

Chair: Eduardo J. Lopez Soto, PhD

THEME B: NEURAL EXCITABILITY, SYNAPSES, AND GLIA

Minisymposium

Cell-Type Specificity, Strength, and Dynamics of Long-Range Synaptic Input **CME**

Chair: Gabe J. Murphy, PhD

Co-Chair: Leopoldo T. Petreanu, PhD

Symposium

Dissecting Cerebellar Function: A Prototypical Circuit Critical for Motor Learning and Cognition **CME**

Chair: Michisuke Yuzaki, MD, PhD

Minisymposium

Novel Mechanistic Roles for Sodium Channels in Neurodevelopmental Disorders **CME**

Chair: Kevin J. Bender, PhD

Co-Chair: Ethan M. Goldberg, MD, PhD

Minisymposium

Pleiotropic Mitochondria: The Influence of Mitochondria on Neuronal Development and Disease **CME**

Chair: Julien Courchet, PhD

Co-Chair: Seok-Kyu Kwon, PhD

Minisymposium

The Gut-Brain Axis in Health and Brain Disease **CME**

Chair: Arthur Liesz, MD

Co-Chair: Jane A. Foster, PhD

Minisymposium

The Synaptic Vesicle Cycle Revisited: New Insight Into the Modes and Mechanisms **CME**

Chair: Jennifer R. Morgan, PhD

Co-Chair: Shigeki Watanabe, PhD

THEME C: NEURODEGENERATIVE DISORDERS AND INJURY

Symposium

CNS Scarring, Inflammation, and Repair **CME**

Chair: Christian Goeritz, PhD

Co-Chair: Michael V. Sofroniew, MD, PhD

Symposium

Comparing Dopamine Metabolism in Mouse and Human Neurons: Relevance for Parkinson's Disease **CME**

Chair: Dimitri Krainc, MD, PhD

SYMPOSIA AND MINISYMPOSIA



Minisymposium

Myelin Degeneration and Remyelination in Health and Disease **CME**

Chair: Carlos E. Pedraza, PhD
Co-Chair: Tarek Samad, PhD

Minisymposium

Necroptosis and Other Non-Apoptotic Processes in Microglial Pathophysiology and Neurologic Diseases **CME**

Chair: Dmitry Ofengeim, PhD

Minisymposium

Phenotype Suppression in Neurodegeneration **CME**

Chair: Kristi Wharton, PhD

Symposium

The Molecular and Spatial Complexity of Tau: What Forms and Loci to Target? **CME**

Chair: Dominic M. Walsh, PhD

THEME D: SENSORY SYSTEMS

Minisymposium

Expecting the Unexpected: Cortical Circuits for Novelty Detection **CME**

Chair: Jordan P. Hamm, PhD

Symposium

New Approaches to Vision Restoration **CME**

Chair: Joshua R. Sanes, PhD
Co-Chair: Paul A. Sieving, MD, PhD

Minisymposium

Parabrachial Complex: A Hub for Pain and Aversion **CME**

Chair: Mary M. Heinricher, PhD

Minisymposium

Progress in Pain and Itch Research **CME**

Chair: Qin Liu, PhD
Co-Chair: Hongzhen Hu, MD, PhD

Minisymposium

Sensory Circuits for Vision and Smell: Integrating Molecular, Anatomical, and Functional Maps **CME**

Chair: Alexander Fleischmann, PhD
Co-Chair: Andreas T. Schaefer, PhD

Minisymposium

What Do Neurons Want? **CME**

Chair: Gabriel Kreiman, PhD
Co-Chair: Carlos R. Ponce, MD, PhD

THEME E: MOTOR SYSTEMS

Minisymposium

Adaptive Control of Movements and Emotional States by the Cerebellum **CME**

Chair: Reza Shadmehr, PhD

Minisymposium

Beta Oscillations in Sensorimotor Function, Executive Action Control, and Working Memory **CME**

Chair: Robert Schmidt, PhD
Co-Chair: Adam R. Aron, PhD

BASIC-TRANSLATIONAL-CLINICAL ROUNDTABLES

Exoskeletons and Robotics for Neurorehabilitation **CME**

Organizer: Ann M. Spungen, EdD

Gene Therapy in Neurological Diseases **CME**

Organizer: Asa Abeliovich, MD, PhD

Mechanisms of Drug Addiction: A Translational Perspective **CME**

Organizer: Trevor W. Robbins, PhD

Minisymposium

Gain Control in the Sensorimotor System: From Neural Circuit Organization to Behavioral Function **CME**

Chair: Kazuhiko Seki, PhD
Co-Chair: Eiman Azim, PhD

Minisymposium

The Neural Basis of Manual Dexterity **CME**

Chair: Sliman J. Bensmaia, PhD

SYMPOSIA AND MINISYMPOSIA

THEME F: INTEGRATIVE PHYSIOLOGY & BEHAVIOR

Symposium

Cortical Disinhibitory Circuits: Cell Types, Connectivity, and Function CME

Chair: Lisa Topolnik, PhD

Co-Chair: Klas Kullander, PhD

Minisymposium

Insights Into Neural Coding and Behavior From Large-Scale Population Recordings Across Cortical Areas CME

Chair: Jerry L. Chen, PhD

Symposium

Neural Circuit and Plasticity Mechanisms of Cognitive Control of Feeding Behavior CME

Chair: Gorica D. Petrovich, PhD

Minisymposium

Redefining Neuromodulation of Behavior: Impact of a Modular Locus Coeruleus Architecture CME

Chair: Nelson K. B. Totah, PhD

Minisymposium

Regulation and Dysregulation of Activity Homeostasis in Central Neural Circuits CME

Chair: Inna Slutsky, PhD

Co-Chair: Samuel Barnes, PhD

Minisymposium

Sex Differences in Drug Craving and Addiction-Like Behaviors in Rodent Models CME

Chair: Mathieu E. Wimmer, PhD

Co-Chair: Jessica A. Loweth, PhD

THEME G: MOTIVATION & EMOTION

Minisymposium

Brain Circuits for the Selection and Scaling of Defensive Behavior CME

Chair: Stephen Maren, PhD

Minisymposium

Cannabis and the Developing Brain: Insights Into Its Long-Lasting Effects CME

Chair: Yasmin Hurd, PhD

Co-Chair: Miriam Melis, PhD

Symposium

Epigenetic Mechanisms: Shared Pathology Across Brain Disorders CME

Chair: Eric J. Nestler, MD, PhD

Co-Chair: Zhen Yan, PhD

Symposium

The Paraventricular Thalamus (PVT): Salience and Timing Orchestrator for Learning and Deciding CME

Chair: Seema Bhatnagar, PhD

Co-Chair: Tallie Z. Baram, MD, PhD

Minisymposium

Ventral Tegmental Area (VTA) Cell Heterogeneity in Health and Disease CME

Chair: Nicholas W. Gilpin, PhD

Co-Chair: Elyssa B. Margolis, PhD

THEME H: COGNITION

Minisymposium

Awakening the Engram: The Etiological Role of Engram Cells for Memory Formation, Storage, and Retrieval in Health and Disease CME

Chair: Johannes Gräff, PhD

Co-Chair: Tomas J. Ryan, PhD

Minisymposium

Brain Mechanisms of Concept Learning CME

Chair: Dagmar Zeithamova, PhD

Co-Chair: Michael L. Mack, PhD

Minisymposium

Cognitive Cerebellum: Role in Motivation, Emotion, Executive, Social, and Sensory Processing CME

Chair: Iaroslav A. Savtchouk, PhD

Co-Chair: June Liu, MD, PhD

Minisymposium

Grid-Like Hexadirectional Modulation of Neural Activity in Humans CME

Chair: Nanthia A. Suthana, PhD

Minisymposium

Naturalistic Paradigms in Awake Monkeys: Bridging fMRI and Extra-Cellular Activities CME

Chair: Sze Chai Kwok, PhD

Co-Chair: Brian E. Russ, PhD

Symposium

Opening the Black Box of the Hippocampus: Visualizing Memories in Distinct Cell Types, Microcircuits, and Cellular Compartments CME

Chair: Mazen Kheirbek, PhD

THEME I: TECHNIQUES

Minisymposium

Advanced Circuit and Cellular Imaging Methods in Non-Human Primates CME

Chair: Stephen L. Macknik, PhD

Minisymposium

Artificial Intelligence and Neuroscience: From Neural Dynamics to Artificial Agents CME

Chair: Jonathan W. Pillow, PhD

Minisymposium

BRAIN Initiative: Cutting-Edge Tools and Resources for the Community CME

Chair: Walter J. Koroshetz, MD

Symposium

Brain Somatic Mosaicism: Implications for Development and Disorders CME

Chair: Flora M. Vaccarino, MD

Co-Chair: Alexander E. Urban, PhD

Minisymposium

Optical Recording of Neural Transmission: From Tool Development to Applications CME

Chair: Haining Zhong, PhD

Co-Chair: Loren L. Looger, PhD

Minisymposium

Timing is Everything: Temporally Irregular Stimulation Patterns for Brain Mapping and Clinical Therapeutics CME

Chair: Alik S. Widge, MD, PhD

STORYTELLING SESSION 50

THEME J: HISTORY, EDUCATION, AND SOCIETY

The Storytelling Brain: How Neuroscience Stories Help Bridge the Gap Between Research and Society

Chair: Susana Martinez-Conde, PhD