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Minisymposia

MIN01. Hypothalamic Supramammillary Control of Cognition and Motivation - Satoshi Ikemoto

Theme G – Motivation and Emotion

Location: WCC 146AB

Time: Saturday, November 11, 2023, 2:00 PM - 4:30 PM

Description: The supramammillary region (SuM) in the posterior hypothalamus has been known classically for its roles in hippocampal theta rhythm and learning/memory. However, recent findings have found a role for this region in coordinating exploratory-related cognitive functions, social interaction, and motivational drive. The minisymposium will highlight this fascinating understudied region and discuss the recent research on SuM functions.

Time: Saturday, November 11, 2023, 2:00 PM - 4:30 PM

MIN01.01. Chair

S. Ikemoto;
NIH/NIDA, Baltimore, MD.

Time: Saturday, November 11, 2023, 2:00 PM - 4:30 PM

MIN01.02. Co Chair

A. J. Kesner;
National Institute on Alcohol Abuse and Alcoholism, Bethesda, MD.

Time: Saturday, November 11, 2023, 2:05 PM - 2:28 PM

MIN01.03. Hypothalamic modulation of adult hippocampal neurogenesis regulates memory and emotion processing

J. Song;
University of North Carolina at Chapel Hill, CHAPEL HILL, NC.

Time: Saturday, November 11, 2023, 2:28 PM - 2:51 PM

MIN01.04. Hebbian and non-Hebbian forms of long-term potentiation at the supramammillary-dentate granule cell synapses

Y. Hashimotodani;
Doshisha University, Kyoto, JAPAN.

Time: Saturday, November 11, 2023, 2:51 PM - 3:14 PM

MIN01.05. Oxytocin activity in the Paraventricular and Supramammillary Nucleus of the Hypothalamus is Essential for Social Recognition Memory in Rats

H. Harony-Nicolas;

Icahn School of Medicine At Mount Sinai, New York, NY.

Time: Saturday, November 11, 2023, 3:14 PM - 3:37 PM

MIN01.06. Behavior-dependent interference between theta oscillators in the medial septum and the supramammillary nucleus

H. T. Ito;

Max Planck Institute for Brain Research, Frankfurt, GERMANY.

Time: Saturday, November 11, 2023, 3:37 PM - 4:00 PM

MIN01.07. The supramammillo-septal pathway in reward-seeking behaviors

A. J. Kesner;

NIAAA, Rockville, MD.

Time: Saturday, November 11, 2023, 4:00 PM - 4:23 PM

MIN01.08. Supramammillary projections to the lateral preoptic area are inhibited by reward and activated by salient stimuli, while their activation is rewarding

Y. Arima;

NIDA/NIH, Baltimore, MD.

MIN02. Learning From Doing: Exploring the Functional Role of Movement-Related Dopamine Activity - Joshua T. Dudman

Theme E – Motor Systems

Location: WCC 145

Time: Saturday, November 11, 2023, 2:00 PM - 4:30 PM

Description: This minisymposium will focus on cross-species work that reveals the diverse functional role movement-related dopaminergic activity plays in guiding ongoing and future behavior. Talks will provide converging evidence for two emerging perspectives: 1) Movement and reinforcement signals are multiplexed to support efficient learning and guide contextually appropriate behavior; 2) Pure movement-related activity encodes a teaching signal that acts in parallel with reinforcement signals to drive learning.

Time: Saturday, November 11, 2023, 2:00 PM - 4:30 PM

MIN02.01. Chair

J. T. Dudman;

HHMI Janelia Research Campus, Ashburn, VA.

Time: Saturday, November 11, 2023, 2:00 PM - 4:30 PM

MIN02.02. Co Chair

M. Stephenson-Jones;

Sainsbury Wellcome Centre, London, UNITED KINGDOM.

Time: Saturday, November 11, 2023, 2:05 PM - 2:28 PM

MIN02.03. Unique functional responses differentially map onto genetic subtypes of dopamine neurons in mice.

M. Azcorra;

Northwestern University, Northwestern University, Chicago, IL.

Time: Saturday, November 11, 2023, 2:28 PM - 2:51 PM

MIN02.04. Mesolimbic dopamine adapts the rate of learning from action

J. T. Dudman;

HHMI, HHMI Janelia Research Campus, Ashburn, VA.

Time: Saturday, November 11, 2023, 2:51 PM - 3:14 PM

MIN02.05. Dopaminergic computations for perceptual learning from naïve to expert

A. Lak;

Oxford University, Oxford, UNITED KINGDOM.

Time: Saturday, November 11, 2023, 3:14 PM - 3:37 PM

MIN02.06. Spontaneous behavior is structured by reinforcement without explicit reward

M. Jay;

Harvard University, Boston, MA.

Time: Saturday, November 11, 2023, 3:37 PM - 4:00 PM

MIN02.07. Dopamine dynamics shapes ongoing navigation in *Drosophila*

A. Siliciano;

Rockefeller University, New York, NY.

Time: Saturday, November 11, 2023, 4:00 PM - 4:23 PM

MIN02.08. Action prediction error: a value-free dopaminergic teaching signal that drives stable learning

M. Stephenson-Jones;

Sainsbury Wellcome Centre, University College London, London, UNITED KINGDOM.

MIN03. Suppression and Variability in Visual Cortex - Ruben Coen-Cagli

Theme D – Sensory Systems

Location: WCC Ballroom B

Time: Saturday, November 11, 2023, 2:00 PM - 4:30 PM

Description: Response suppression and response variability are major foci of study in the visual cortex. They have mostly been studied independently of each other, but recent work by several groups suggests they may share a common origin. This hypothesis is based on work coming from different research traditions and targeting different levels of understanding. In this session we will discuss evolving perspectives on suppression, variability and their relation.

Time: Saturday, November 11, 2023, 2:00 PM - 4:30 PM

MIN03.01. Chair

R. Coen-Cagli;

Albert Einstein College of Medicine, Bronx, NY.

Time: Saturday, November 11, 2023, 2:00 PM - 4:30 PM

MIN03.02. Co Chair

R. L. T. Goris;

University of Texas At Austin, Austin, TX.

Time: Saturday, November 11, 2023, 2:05 PM - 2:28 PM

MIN03.03. Cortical Activity Fluctuations: the Good, the Bad and the Circuits.

R. Coen-Cagli;

Albert Einstein College of Medicine, Albert Einstein College of Medicine, Bronx, NY.

Time: Saturday, November 11, 2023, 2:28 PM - 2:51 PM

MIN03.04. The representation of visual uncertainty in V1 population activity

Z. Boundy-Singer;

3202 Helms St. Apt 207, University of Texas at Austin, Austin, TX.

Time: Saturday, November 11, 2023, 2:51 PM - 3:14 PM

MIN03.05. Comparing modulation by multiple tasks to modulation by multiple stimuli

M. R. Cohen;

University of Chicago, Chicago, IL.

Time: Saturday, November 11, 2023, 3:14 PM - 3:37 PM

MIN03.06. Heterogeneity in normalization and attentional modulation in a circuit model

C. Huang;

University of Pittsburgh, Pittsburgh, PA.

Time: Saturday, November 11, 2023, 3:37 PM - 4:00 PM

MIN03.07. The origins of variable responses in neocortical neurons

N. J. Priebe;

Univ Texas, Austin, Austin, TX.

Time: Saturday, November 11, 2023, 4:00 PM - 4:23 PM

MIN03.08. A recurrent circuit implements normalization, simulating the dynamics of V1 activity

S. Martiniani;

NY.

**MIN04. Advances in Deep Brain Stimulation: From Mechanisms to Applications -
Stephanie Sandoval-Pistorius**

Theme I – Techniques

Location: WCC Ballroom C

Time: Saturday, November 11, 2023, 2:00 PM - 4:30 PM

Description: The study of the neural mechanisms of consciousness has recently been overhauled by the creation of several international adversarial collaborations, that have brought together a new interdisciplinary community focused on solving one of the deepest mysteries in science. This symposium will provide an overview of the theoretical, methodological, experimental, and clinically-related advances in the field of consciousness research. This session will show how open science is essential to the field's progress.

Time: Saturday, November 11, 2023, 2:00 PM - 4:30 PM

MIN04.01. Chair

S. Sandoval-Pistorius;

University of California San Francisco, San Francisco, CA.

Time: Saturday, November 11, 2023, 2:00 PM - 4:30 PM

MIN04.02. Co Chair

S. Cernera;

University of California, San Francisco, University of California, San Francisco, San Francisco, CA.

Time: Saturday, November 11, 2023, 2:05 PM - 2:28 PM

MIN04.03. Connectivity Profile for Deep Brain Stimulation in Early-Stage Parkinson's Disease

M. L. Hacker;

Vanderbilt University Medical Center, Nashville, TN.

Time: Saturday, November 11, 2023, 2:28 PM - 2:51 PM

MIN04.04. Perturbation Mapping with Deep Brain Stimulation Evoked Potentials to Optimize Treatment for Severe Depression

A. C. Waters;

Icahn School of Medicine at Mount Sinai, New York City, NY.

Time: Saturday, November 11, 2023, 2:51 PM - 3:14 PM

MIN04.05. Coordinated reset deep brain stimulation for Parkinson's Disease: Preclinical explorations in the parkinsonian nonhuman primates

J. Wang;

University of Minnesota, Minneapolis, MN.

Time: Saturday, November 11, 2023, 3:14 PM - 3:37 PM

MIN04.06. Electrocorticography biomarkers of response to deep brain stimulation for obsessive-compulsive disorder

N. R. Provenza;

Baylor College of Medicine, Baylor College of Medicine, Houston, TX.

Time: Saturday, November 11, 2023, 3:37 PM - 4:00 PM

MIN04.07. Deep brain stimulation induced neurophysiological effects to guide treatment of movement disorders

C. de Hemptinne;

University of Florida, Gainesville, CA.

Time: Saturday, November 11, 2023, 4:00 PM - 4:23 PM

MIN04.08. Simultaneous fMRI-DBS to assess therapeutic mechanisms of stimulation in Parkinson's disease and obsessive-compulsive disorder

M. Morrison;

University of California San Francisco, San Francisco, CA.

MIN05. The Paraventricular Nucleus of the Thalamus (PVT) as a Mediator of Adaptations to Stress and Drug Use - Jessica Barson

Theme G – Motivation and Emotion

Location: WCC 145

Time: Sunday, November 12, 2023, 9:30 AM - 12:00 PM

Description: The paraventricular nucleus of the thalamus (PVT) is a major node in the limbic system, participating in both affective and motivated behaviors. Research has implicated the PVT in fear and stress behavior as well as drug seeking behavior. This session will address recent advances in research on the role of the PVT in the adaptation to repeated stress and drug exposure, identifying the critical role of the PVT in the development of negative affective states and disinhibited drug seeking.

Time: Sunday, November 12, 2023, 9:30 AM - 12:00 PM

MIN05.01. Chair

J. R. Barson;

Drexel University College of Medicine, Drexel University College of Medicine Neuroscience Program, Philadelphia, PA.

Time: Sunday, November 12, 2023, 9:30 AM - 12:00 PM

MIN05.02. Co Chair

S. Bhatnagar;

Anesthesiology, University of Pennsylvania and Children's Hospital of Philadelphia, Philadelphia, PA.

Time: Sunday, November 12, 2023, 9:35 AM - 9:58 AM

MIN05.03. Functional properties of corticothalamic circuits targeting the paraventricular thalamic nucleus

G. Aquino-Miranda;

University of Texas Health Science Center At Houst, University of Texas Health Science Center at Houston, Houston, TX.

Time: Sunday, November 12, 2023, 9:58 AM - 10:21 AM

MIN05.04. Arc-mediated plasticity in the paraventricular thalamic nucleus promotes habituation to stress

B. F. Corbett;

Biology, Rutgers University - Camden, Camden, NJ.

Time: Sunday, November 12, 2023, 10:21 AM - 10:44 AM

MIN05.05. Do transcriptional/translational changes in PVT cells selectively activated during early-life stress drive adult anhedonia-like reward behaviors?

A. Floriou-Servou;

Anatomy & Neurobiology, University of California, Irvine, Irvine, CA.

Time: Sunday, November 12, 2023, 10:44 AM - 11:07 AM

MIN05.06. Exploring the role of PVT ensembles in social stress-escalated alcohol consumption

R. Maiya;

Physiology, LSU Health Sciences Center, New Orleans, LA.

Time: Sunday, November 12, 2023, 11:07 AM - 11:30 AM

MIN05.07. Alcohol dependence disrupts paraventricular thalamic activation of accumbal parvalbumin interneurons releasing inhibitory control over alcohol seeking

J. A. Rinker;

Medical University of South Carolina, Medical University of South Carolina, Charleston, SC.

Time: Sunday, November 12, 2023, 11:30 AM - 11:53 AM

MIN05.08. Mu-opioid receptors on paraventricular thalamostriatal neurons drive behavioral disinhibition in heroin dependent mice

J. M. Otis;

Medical University of South Carolina, Medical University of South Carolina, CHARLESTON, SC.

MIN06. The Integrative Action of the Locomotor System: From Initiation to Execution - Carmelo Bellardita

Theme E – Motor Systems

Location: WCC 151

Time: Sunday, November 12, 2023, 9:30 AM - 12:00 PM

Description: Movement emerges from the integrated action of neural circuits in the brain and spinal cord. Recent work using state-of-the-art approaches has provided new details in the circuitry and function of locomotor areas along the brain-spinal cord axis that will be described in this minisymposium. The speakers will present a comprehensive view of the latest findings, covering supraspinal command circuitries, spinal executive centers, integrated action of the areas, and sensory modulation.

Time: Sunday, November 12, 2023, 9:30 AM - 12:00 PM

MIN06.01. Chair

C. Bellardita;

Department of Neuroscience, Copenhagen University, Copenhagen, DENMARK.

Time: Sunday, November 12, 2023, 9:30 AM - 12:00 PM

MIN06.02. Co Chair

L. Hsu;

Karolinska Insistute, Karolinska Institute, Stockholm, SWEDEN.

Time: Sunday, November 12, 2023, 9:35 AM - 9:58 AM

MIN06.03. Brainstem control of locomotion in physiological and pathological conditions

D. Ryczko;

Université de Sherbrooke, Université De Sherbrooke, Sherbrooke, QC, CANADA.

Time: Sunday, November 12, 2023, 9:58 AM - 10:21 AM

MIN06.04. Deconstructing the modular organization and real-time dynamics of mammalian spinal locomotor networks

L. Hsu;

Karolinska Insistute, Karolinska Institute, Stockholm, SWEDEN.

Time: Sunday, November 12, 2023, 10:21 AM - 10:44 AM

MIN06.05. Neuromodulation of the motor cortex to reverse locomotor deficits after spinal cord injury

M. Martinez;

Neuroscience, University of Montreal, Montreal, QC, CANADA.

Time: Sunday, November 12, 2023, 10:44 AM - 11:07 AM

MIN06.06. Development and spinal cord injury-related plasticity of spinal locomotor rhythm generating circuits.

K. J. Dougherty;

Drexel University College of Medicine, Drexel University College of Medicine, Philadelphia, PA.

Time: Sunday, November 12, 2023, 11:07 AM - 11:30 AM

MIN06.07. Proprioceptive control of challenging locomotion

A. Santuz;

Max-Delbrück-Center for Molecular Medicine in the Helmholtz Association, Berlin, GERMANY.

Time: Sunday, November 12, 2023, 11:30 AM - 11:53 AM

MIN06.08. Spinal circuits for sensorimotor integration during locomotion at different speeds, gaits and environments: insights from computational models

S. M. Danner;

Drexel University, Drexel University, Philadelphia, PA.

MIN07. Circuits and Systems Underlying Altered Social and Sensory Behaviors in Autism Spectrum Disorder - Anubhuti Goel

Theme D – Sensory Systems

Location: WCC Ballroom B

Time: Sunday, November 12, 2023, 9:30 AM - 12:00 PM

Description: Sensory atypicalities, although predicative of social issues, are the most recently added diagnostic criteria to autism spectrum disorder (ASD). This session will discuss novel tasks for probing social and sensory behaviors in humans, marmosets, and rodents. We will expand the definition of sensory phenotypes beyond hyper- or hyporeactive states to include complex clinical behaviors, and detail mechanisms that promote social impairments and/or auditory, visual, and tactile sensory atypicalities.

Time: Sunday, November 12, 2023, 9:30 AM - 12:00 PM

MIN07.01. Chair

A. Goel;

University Of California Riverside, Riverside, CA.

Time: Sunday, November 12, 2023, 9:30 AM - 12:00 PM

MIN07.02. Chair

M. Antoine;

National Institutes on Alcohol Abuse and Alcoholism, National Institutes of Health, ROCKVILLE, MD.

Time: Sunday, November 12, 2023, 9:35 AM - 9:58 AM

MIN07.03. Interoceptive and multisensory determinants of social symptoms in autism

C. J. Cascio;

5203 ELKINS AVE, Vanderbilt University Medical Center, Nashville, TN.

Time: Sunday, November 12, 2023, 9:58 AM - 10:21 AM

MIN07.04. A Shank3 marmoset model for autism displays atypical social and cognitive behaviors

W. Menegas;

BCS (Brain and Cognitive Sciences), MIT, Cambridge, MA.

Time: Sunday, November 12, 2023, 10:21 AM - 10:44 AM

MIN07.05. Neural circuits underlying social touch behavioral deficits in mouse models of autism

T. Chari;

Neurology, University of California - Los Angeles, Los Angeles, CA.

Time: Sunday, November 12, 2023, 10:44 AM - 11:07 AM

MIN07.06. Observational Social Learning in Mouse Models of ASD

A. Contractor;

Northwestern University, Chicago, IL.

Time: Sunday, November 12, 2023, 11:07 AM - 11:30 AM

MIN07.07. Familiarity-evoked oscillations as a visual learning mechanism impaired in a mouse model of Fragile X Syndrome

A. A. Chubykin;

Purdue University, Purdue University, West Lafayette, IN.

Time: Sunday, November 12, 2023, 11:30 AM - 11:53 AM

MIN07.08. Treating Autism by Targeting Temperature-Modulated Potassium Channels

M. W. Antoine;

NIH, ROCKVILLE, MD.

MIN08. Understanding the Role of Astrocytes in Regulation of Complex Behavior - Olena Bukalo

Theme F – Integrative Physiology and Behavior

Location: WCC 145

Time: Sunday, November 12, 2023, 2:00 PM - 4:30 PM

Description: The session will discuss the function of astrocytes in behavioral modulation with a focus on *in vivo* studies in rodents. By monitoring astrocytic calcium dynamic and/or neuronal activity, while using genetic, chemogenetics, or optogenetics tools to manipulate astrocytes, changes in various brain network function and ultimately behavior are demonstrated. Those studies indicate the causal role astrocytes play in fundamental physiological behaviors and memory encoding.

Time: Sunday, November 12, 2023, 2:00 PM - 4:30 PM

MIN08.01. Chair

O. Bukalo;

NIH, NIH/NIAAA, Rockville, MD.

Time: Sunday, November 12, 2023, 2:05 PM - 2:28 PM

MIN08.02. Role of astrocytes in regulation of breathing behaviors

S. SheikhBahaei;

National Institute of Neurological Disorders and Stroke, National Institutes of Health, Bethesda, MD.

Time: Sunday, November 12, 2023, 2:28 PM - 2:51 PM

MIN08.03. Glial modulation of thalamic sensory processing

E. Cheong;

Yonsei University, Yonsei University, Seoul, KOREA, REPUBLIC OF.

Time: Sunday, November 12, 2023, 2:51 PM - 3:14 PM

MIN08.04. Astrocytes mediate acute and permanent effects of stress hormones on physiology and behavior.

M. Slezak;

Department of Life Science and Biotechnology, Lukasiewicz Research Network - PORT Polish Center for Technology Development, Wroclaw, POLAND.

Time: Sunday, November 12, 2023, 3:14 PM - 3:37 PM

MIN08.05. Dysfunctional serotonergic neuron-astrocyte signaling in depressive-like states

C. Gonzalez-Arias;

Cajal Institute, Madrid, SPAIN.

Time: Sunday, November 12, 2023, 3:37 PM - 4:00 PM

MIN08.06. Role of basolateral amygdala astrocytes in fear memory

O. Bukalo;

National Institute on Alcohol Abuse and Alcoholism, NIH/NIAAA, Rockville, MD.

Time: Sunday, November 12, 2023, 4:00 PM - 4:23 PM

MIN08.07. Complementary encoding of spatial information by hippocampal astrocytes

T. Fellin;

Istituto Italiano di Tecnologia, Italian Institute of Technology, Genoa, ITALY.

MIN09. Cracking the Wiring Codes for Synaptic Specificity, Circuit Formation, and Function - Julie Lefebvre

Theme A – Development

Location: WCC Ballroom B

Time: Sunday, November 12, 2023, 2:00 PM - 4:30 PM

Description: Precise neural circuit assembly and function require diverse but selective actions by surface receptors and adhesion molecules. As transcriptomic studies reveal cell-type specific expression and diversification of cell surface proteins (CSPs), the next frontier is to bridge molecular diversity to wiring specificity. This session will present new concepts and methods for cell-type specific regulation and combinatorial actions of wiring molecules in synapse specificity and circuit connectivity.

Time: Sunday, November 12, 2023, 2:00 PM - 4:30 PM

MIN09.01. Chair

J. L. Lefebvre;

Neuroscience, Hospital for Sick Children Research Institute/ University of Toronto, Toronto, ON, CANADA.

Time: Sunday, November 12, 2023, 2:00 PM - 4:30 PM

MIN09.02. Co Chair

M. E. Williams;

Neurobiology, University of Utah, Salt Lake City, UT.

Time: Sunday, November 12, 2023, 2:05 PM - 2:28 PM

MIN09.03. Isoform diversity of cell-surface recognition molecules: How much is needed to wire the nervous system?

J. N. Kay;

Neurobiology & Ophthalmology, Duke University, Durham, NC.

Time: Sunday, November 12, 2023, 2:28 PM - 2:51 PM

MIN09.04. The generation of Protocadherin isoform diversity by the cohesin complex and genome architecture.

D. Canzio;

University of California San Francisco, San Francisco, CA.

Time: Sunday, November 12, 2023, 2:51 PM - 3:14 PM

MIN09.05. Cortical wiring by synapse type-specific control of local protein synthesis.

C. Bernard;

King's College London, London, UNITED KINGDOM.

Time: Sunday, November 12, 2023, 3:14 PM - 3:37 PM

MIN09.06. Mixing and re-purposing cell adhesion partners for specifying inhibitory wiring in the cerebellum.

M. T. Gray;

Hospital For Sick Children Research Institute, Toronto, ON, CANADA.

Time: Sunday, November 12, 2023, 3:37 PM - 4:00 PM

MIN09.07. Understanding the extracellular architectures and binding preferences of synaptic adhesion complexes.

J. Brasch;

Biochemistry, University of Utah, Salt Lake City, UT.

Time: Sunday, November 12, 2023, 4:00 PM - 4:23 PM

MIN09.08. In situ cell-surface proteomics: method development and applications in neuronal wiring

J. Li;

Group Leader, Janelia Research Campus, HHMI, Ashburn, VA.

MIN10. Listening to the Data: Novel Computational Approaches to Addiction and Reward Processing - Courtney Wilkinson

Theme G – Motivation and Emotion

Location: WCC Ballroom C

Time: Sunday, November 12, 2023, 2:00 PM - 4:30 PM

Description: Computational approaches in addiction neuroscience are a promising tool to overcome difficulties in creating models effective for identifying treatment targets. From circuitries underlying model-based reinforcement learning to computationally-derived neural markers of drug-cue reactivity, we showcase the benefits of novel modeling techniques gaining traction in the field and highlight recent breakthroughs in cognitive mapping, risky decision-making, patterns of drug taking, and relapse.

Time: Sunday, November 12, 2023, 2:00 PM - 4:30 PM

MIN10.01. Chair

C. S. Wilkinson;

Department of Psychology, University of Florida, Gainesville, FL.

Time: Sunday, November 12, 2023, 2:00 PM - 4:30 PM

MIN10.02. Co Chair

M. A. Lujan;

Department of Anatomy and Neurobiology, University of Maryland, School of Medicine, Baltimore, MD.

Time: Sunday, November 12, 2023, 2:05 PM - 2:28 PM

MIN10.03. Computational psychiatry of addictions: a multilevel approach across Marrian levels of analysis

V. G. Fiore;

Department of Psychiatry, Icahn School of Medicine at Mount Sinai, New York City, NY.

Time: Sunday, November 12, 2023, 2:08 PM - 2:31 PM

MIN10.04. The orbitofrontal cortex determines the specificity of model-based learning

K. M. Costa;

Intramural Research Program, National Institute on Drug Abuse, Baltimore, MD.

Time: Sunday, November 12, 2023, 2:31 PM - 2:54 PM

MIN10.05. Modeling risky decision making in gambling rats

C. A. Hales;

Department of Psychology, University of British Columbia, Vancouver, BC, CANADA.

Time: Sunday, November 12, 2023, 2:54 PM - 3:17 PM

MIN10.06. Data analysis strategies for uncovering the impact of comorbidities on intravenous, oxycodone self-administration, extinction and reinstatement in rats

C. S. Wilkinson;

Department of Psychology, University of Florida, Gainesville, FL.

Time: Sunday, November 12, 2023, 3:17 PM - 3:40 PM

MIN10.07. A Bayesian regressor of patterned dopamine release predicts relapse to cocaine

M. A. Lujan;

Department of Anatomy and Neurobiology, University of Maryland, School of Medicine, Baltimore, MD.

Time: Sunday, November 12, 2023, 3:40 PM - 4:03 PM

MIN10.08. A machine-learning based neural marker for craving distinguishes drug users from non-users

H. kober;

Department of Psychiatry, Yale University, New Haven, CT.

MIN11. Leveraging Intrinsic and Extrinsic Neuronal Mechanisms for Brain and Spinal Cord Injury Repair - Andrea Tedeschi

Theme C – Neurodegenerative Disorders and Injury

Location: WCC 146AB

Time: Sunday, November 12, 2023, 2:00 PM - 4:30 PM

Description: Progress has been made to further our understanding of the mechanisms controlling axon growth, regeneration, and recovery of function after CNS trauma. Promising targets, molecular pathways, and cellular mechanisms that can be manipulated for therapeutic gain have been recently identified. This session will focus on the dynamic interplay between neurons and non-neuronal cells in experimental models of brain and spinal cord injury to aid tissue regeneration and neural circuit repair.

Time: Sunday, November 12, 2023, 2:00 PM - 4:30 PM

MIN11.01. Chair

A. Tedeschi;

The Ohio State University, The Ohio State University, Columbus, OH.

Time: Sunday, November 12, 2023, 2:00 PM - 4:30 PM

MIN11.02. Co Chair

M. A. Chen;

University of Kentucky, University of Kentucky, Lexington, KY.

Time: Sunday, November 12, 2023, 2:05 PM - 2:28 PM

MIN11.03. Spinal cord injury site pathobiology as revealed through spatial transcriptomics

J. K. Lee;

University of Miami, University of Miami, Miami, FL.

Time: Sunday, November 12, 2023, 2:28 PM - 2:51 PM

MIN11.04. Astrocytes in acute CNS repair

M. A. Chen, 1;

University of Kentucky, University of Kentucky, Lexington, KY.

Time: Sunday, November 12, 2023, 2:51 PM - 3:14 PM

MIN11.05. Promoting myelin repair through microglial reprogramming

J. K. Huang;

Biology, Georgetown University, Washington, DC.

Time: Sunday, November 12, 2023, 3:14 PM - 3:37 PM

MIN11.06. Neurovascular crosstalk in nerve development and repair

D. Bonanomi;

San Raffaele Scientific Instit, San Raffaele Scientific Institute, Milano, ITALY.

Time: Sunday, November 12, 2023, 3:37 PM - 4:00 PM

MIN11.07. Pericytes: problems and promises for spinal cord injury repair

A. Tedeschi;

The Ohio State University, The Ohio State University, Columbus, OH.

Time: Sunday, November 12, 2023, 4:00 PM - 4:23 PM

MIN11.08. Hb-egf is a neurogenic factor required for tissue bridging and spinal cord regeneration in zebrafish

V. Cigliola;

Institute of Biology Valrose, Université Côte d'Azur, INSERM, Nice, FRANCE.

MIN12. Olfaction and Psychiatric Disorders - Kun Yang

Theme D – Sensory Systems

Location: WCC 145

Time: Monday, November 13, 2023, 9:30 AM - 12:00 PM

Description: Olfactory deficits have been consistently observed across psychiatric disorders. However, the underlying mechanisms of how olfactory impairments are linked to abnormal brain functions and behavioral deficits remain unknown. This session will bring together experts in molecular biology, brain imaging, and preclinical research to cover frontline studies, cell models, and techniques for investigating the role of the olfactory system in psychiatric disorders.

Time: Monday, November 13, 2023, 9:30 AM - 12:00 PM

MIN12.01. Chair

K. Yang;

Psychiatry, Johns Hopkins University, Baltimore, MD.

Time: Monday, November 13, 2023, 9:30 AM - 12:00 PM

MIN12.02. Co Chair

M. Ma;

Neuroscience, University of Pennsylvania, Philadelphia, PA.

Time: Monday, November 13, 2023, 9:35 AM - 9:58 AM

MIN12.03. A systems-based approach to drug discovery for neurological disorders using patient-derived olfactory stem cells

A. S. Cristino;

Griffith Institute for Drug Discovery, Griffith University, Brisbane, AUSTRALIA.

Time: Monday, November 13, 2023, 9:58 AM - 10:21 AM

MIN12.04. A proposed mechanism for cognitive impairment in post SARS-CoV-2 subjects: Discovery of amyloid-A β and α -Synuclein in olfactory mucosa-derived cells.

C. Ayala-grosso;

Unidad de Terapia Celular, Instituto Venezolano de Investigaciones Científicas, Caracas, VENEZUELA, BOLIVARIAN REPUBLIC OF.

Time: Monday, November 13, 2023, 10:21 AM - 10:44 AM

MIN12.05. Volumetric alteration of olfactory bulb and immune-related molecular changes in olfactory epithelium in first episode psychosis patients

K. Yang;

Department of Psychiatry, Johns Hopkins University, Baltimore, MD.

Time: Monday, November 13, 2023, 10:44 AM - 11:07 AM

MIN12.06. Olfactory sulcus morphology in neuropsychiatric disorders

T. Takahashi;

Department of Neuropsychiatry, University of Toyama, Toyama, JAPAN.

Time: Monday, November 13, 2023, 11:07 AM - 11:30 AM

MIN12.07. Human olfactory and respiratory networks

A. Sheriff;

Department of Neurology, Northwestern University, Chicago, IL.

Time: Monday, November 13, 2023, 11:30 AM - 11:53 AM

MIN12.08. Olfactory modulation of the medial prefrontal cortex circuitry: implication in sociability

J. P. Bhattarai;

Department of Neuroscience, University of Pennsylvania, Philadelphia, PA.

MIN13. Building Bridges Across Chemistry and Neuroscience: New Approaches for Sensing and Manipulating Neuronal Signaling - Christina Kim

Theme I – Techniques

Location: WCC Ballroom B

Time: Monday, November 13, 2023, 9:30 AM - 12:00 PM

Description: The ability to sense and alter endogenous neural signaling is crucial for discovering mechanisms underlying neural circuit function and animal behavior. Recent advances in chemical biology have led to the development of highly specific and sensitive molecular probes for studying cellular changes in neural activity and neuromodulator/neuropeptide release. This session will highlight new approaches for observing and manipulating both neurochemical and electrical signaling in the brain.

Time: Monday, November 13, 2023, 9:30 AM - 12:00 PM

MIN13.01. Chair

C. K. Kim;

University of California, Davis, DAVIS, CA.

Time: Monday, November 13, 2023, 9:30 AM - 12:00 PM

MIN13.02. Co Chair

I. Ahmed;

New York University, New York University School of Medicine, New York, NY.

Time: Monday, November 13, 2023, 9:35 AM - 9:58 AM

MIN13.03. Chemical tools for optical control of neuropeptide signaling

I. Ahmed;

New York University, New York University School of Medicine, New York, NY.

Time: Monday, November 13, 2023, 9:58 AM - 10:21 AM

MIN13.04. LinCx: Editing neural circuits using engineered synaptic bypasses

E. Ransey;

Duke University, Durham, NC.

Time: Monday, November 13, 2023, 10:21 AM - 10:44 AM

MIN13.05. Green genetically encoded voltage indicators for rapid and prolonged two-photon voltage imaging in vivo

M. Land;

Neuroscience, Baylor College of Medicine, Houston, TX.

Time: Monday, November 13, 2023, 10:44 AM - 11:07 AM

MIN13.06. Chemogenetic tools for manipulating endogenous GPCRs

W. Wang;

Home, University of Michigan, Ann Arbor, Ann Arbor, MI.

Time: Monday, November 13, 2023, 11:07 AM - 11:30 AM

MIN13.07. Proximity-dependent enzymes for tagging activated circuits

C. K. Kim;

University of California, Davis, University of California, Davis, Davis, CA.

Time: Monday, November 13, 2023, 11:30 AM - 11:53 AM

MIN13.08. An Optical Biosensor for Visualizing Dopamine Dynamics with Single Bouton Resolution and Quantal Sensitivity

A. G. Beyene;

Janelia Research Campus, Ashburn, VA.

MIN14. 2A and Beyond! Psychedelic Action at the 5-HT_{2A} and Other Receptors - Mikael Palner

Theme B – Neural Excitability, Synapses, and Glia

Location: WCC Ballroom C

Time: Monday, November 13, 2023, 9:30 AM - 12:00 PM

Description: Psychedelics structurally resemble serotonin and dopamine, and the prevailing theory of psychedelic mechanism of action is 5-HT_{2A} receptor agonism. As psychedelics are potent, long-lasting, and varied in their effects on cognition and neuroplasticity, additional mechanisms seem likely. This symposium will discuss the drugs' receptor targets, downstream pathways, and implicated brain regions. These data will help in the fields of clinical application and targeted drug discovery.

Time: Monday, November 13, 2023, 9:30 AM - 12:00 PM

MIN14.01. Chair

M. Palner;

Clinical Research, University of Southern Denmark, Odense, DENMARK.

Time: Monday, November 13, 2023, 9:30 AM - 12:00 PM

MIN14.02. Co Chair

A. Aguilar Valles;

Dept. of Neuroscience, Carleton University, Ottawa, ON, CANADA.

Time: Monday, November 13, 2023, 9:35 AM - 9:58 AM

MIN14.03. The role of the 5HT_{2A} receptor in mediating therapeutic actions of psychedelics and non-hallucinogenic analogs

L. P. Cameron;

University of California, Davis, Davis, CA.

Time: Monday, November 13, 2023, 9:58 AM - 10:21 AM

MIN14.04. Neuromodulators and psychedelics as protein modifiers in neuronal function and plasticity

J. Benetatos;

University of California, San Diego, San Diego, CA.

Time: Monday, November 13, 2023, 10:21 AM - 10:44 AM

MIN14.05. 2-Bromo-LSD: A Non-Hallucinogenic LSD analogue with therapeutic potential in mood disorders

V. Lewis;

Department of Neuroscience, Carleton University, Ottawa, ON, CANADA.

Time: Monday, November 13, 2023, 10:44 AM - 11:07 AM

MIN14.06. Profiling Psychedelics at 5-HT_{2C} non-canonical G protein signaling pathways

E. M. Bonniwell;

Medical College of Wisconsin, Milwaukee, WI.

Time: Monday, November 13, 2023, 11:07 AM - 11:30 AM

MIN14.07. Neural targets and circuitry involved in the effects of psilocybin on opioid conditioned place preference

A. Jaster;

Virginia Commonwealth University, Richmond, VA.

Time: Monday, November 13, 2023, 11:30 AM - 11:53 AM

MIN14.08. BDNF and TrkB: key to psychedelic-induced neuroplasticity and therapeutic effects

R. Moliner;

University of Helsinki, University of Helsinki, Helsinki, FINLAND.

MIN15. Novel Mechanisms of Endolysosomal Function in Health and Disease - Jason Weick

Theme C – Neurodegenerative Disorders and Injury

Location: WCC 146AB

Time: Monday, November 13, 2023, 9:30 AM - 12:00 PM

Description: Membrane and protein trafficking serves unique roles in nervous tissue, from maintaining axon-dendrite polarity, to promoting synaptic plasticity and macroautophagy. In addition, unique membrane trafficking mechanisms exist during development, and multiple disease states are associated with dysfunction of this system. This minisymposium will present novel findings about basic function and dysfunction of endolysosomal trafficking, signaling, and proteostasis in the nervous system.

Time: Monday, November 13, 2023, 9:30 AM - 12:00 PM

MIN15.01. Chair

J. P. Weick;

Neuroscience, University of New Mexico, Albuquerque, NM.

Time: Monday, November 13, 2023, 9:30 AM - 12:00 PM

MIN15.02. Co Chair

B. R. Winckler;

University of Virginia, Charlottesville, VA 22908, VA.

Time: Monday, November 13, 2023, 9:35 AM - 9:58 AM

MIN15.03. Bi-directional endolysosome transport maintains axonal degradation capacity and axonostasis in health and neurodegenerative diseases

Z. Sheng;

NINDS, NIH, NINDS, NIH, Rockville, MD.

Time: Monday, November 13, 2023, 9:58 AM - 10:21 AM

MIN15.04. Cellular endolysosomal trafficking defects relevant to Parkinson's disease models

M. R. Cookson;

Natl Inst Aging, NIH, Natl Inst Aging, NIH, Bethesda, MD.

Time: Monday, November 13, 2023, 10:21 AM - 10:44 AM

MIN15.05. Role of the AP-4 adaptor complex in regulating neuronal lysosome transport and function

S. Gowrishankar;

University of Illinois at Chicago, University of Illinois at Chicago, Chicago, IL.

Time: Monday, November 13, 2023, 10:44 AM - 11:07 AM

MIN15.06. Chaperone-mediated autophagy in dendrites utilizes lysosomal exocytosis for protein disposal.

K. M. Grochowska;

Leibniz Institute for Neurobiology, Magdeburg, GERMANY.

Time: Monday, November 13, 2023, 11:07 AM - 11:30 AM

MIN15.07. OCRL1 deficiency alters ApoER2 trafficking and Reelin signaling; implications for Lowe syndrome

M. Marzolo;

Pontificia Universidad Católica de Chile, Santiago, CHILE.

Time: Monday, November 13, 2023, 11:30 AM - 11:53 AM

MIN15.08. Autophagy-lysosomal pathways in neurons and astrocytes

S. Maday;

Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA.

MIN16. Setting the Somatosensory Tone: The Spinal Cord Dorsal Horn as a Node for Somatosensory Modulation - Seungwon Choi

Theme D – Sensory Systems

Location: WCC 151

Time: Monday, November 13, 2023, 2:00 PM - 4:30 PM

Description: In this session, we will discuss the blueprint for how somatosensory signals are processed and modulated in the spinal cord dorsal horn by spinal and top-down supraspinal circuit components, including local interneurons and ascending/descending projection neurons. This symposium will impact our understanding of the sensory, motor, emotional, and social aspects of somatosensation and contribute to the emerging picture of the sophistication of contextual processing in the spinal cord dorsal horn.

Time: Monday, November 13, 2023, 2:00 PM - 4:30 PM

MIN16.01. Chair

S. S. Choi;

UT Southwestern Medical Center, UT Southwestern Medical Center, Dallas, TX.

Time: Monday, November 13, 2023, 2:00 PM - 4:30 PM

MIN16.02. Co Chair

G. Gatto;

University Hospital Cologne, University Hospital Cologne, Cologne, GERMANY.

Time: Monday, November 13, 2023, 2:05 PM - 2:28 PM

MIN16.03. Flexible encoding of touch signals in the spinal cord dorsal horn

a. M. Chirila;

Harvard Medical School, Harvard Medical School, Boston, MA.

Time: Monday, November 13, 2023, 2:28 PM - 2:51 PM

MIN16.04. Long-term imaging of pain processing in the spinal cord of awake, behaving animals

B. O. Ahanonu;

University of California, San Francisco, University of California, San Francisco, San Francisco, CA.

Time: Monday, November 13, 2023, 2:51 PM - 3:14 PM

MIN16.05. Putting the pieces together: Assembling itch spinal neuron networks

T. D. Sheahan;

Pittsburgh Center for Pain Research and Department of Neurobiology, University of Pittsburgh, Pittsburgh, PA.

Time: Monday, November 13, 2023, 3:14 PM - 3:37 PM

MIN16.06. Ascending spinal pathways that shape the sense of touch and pain

S. S. Choi;

UT Southwestern Medical Center, UT Southwestern Medical Center, Dallas, TX.

Time: Monday, November 13, 2023, 3:37 PM - 4:00 PM

MIN16.07. Spinal cord oxytocin circuits modulate pain responses by engaging circuits of affective touch

M. Bohic;

W.M. Keck Center for Collaborative Neuroscience, Rutgers University, Piscataway, NJ.

Time: Monday, November 13, 2023, 4:00 PM - 4:23 PM

MIN16.08. The flexible spinal architecture for sensorimotor integration

G. Gatto;

University Hospital Cologne, University Hospital Cologne, Cologne, GERMANY.

**MIN17. From One Task to Many: Generalization for Learning and Decision-Making
- Timothy Buschman**

Theme H – Cognition

Location: WCC 145

Time: Monday, November 13, 2023, 2:00 PM - 4:30 PM

Description: Over the last decades, neuroscientists have built formal models of how neural signals support behavior in individual tasks. However, humans and animals are flexible, able to perform multiple tasks. Importantly, they can extrapolate important features of one task and generalize them to new domains, thus solving novel tasks quicker and more accurately. In this session we will present recent findings in humans, non-human primates, and mice on the neural basis of generalization across tasks.

Time: Monday, November 13, 2023, 2:00 PM - 4:30 PM

MIN17.01. Chair

T. Buschman;

Princeton University, Princeton, NJ.

Time: Monday, November 13, 2023, 2:05 PM - 2:28 PM

MIN17.02. Programmable Attractors in the Mouse Frontal Cortex: a Natural Algorithm for Encoding New Sequences

M. El-Gaby;

Nuffield Department of Clinical Neurosciences, University of Oxford, Oxford, UNITED KINGDOM.

Time: Monday, November 13, 2023, 2:28 PM - 2:51 PM

MIN17.03. Task-general mechanisms of sustained engagement in the primate frontal cortex

J. Grohn;

Department of Experimental Psychology, University of Oxford, Oxford, UNITED KINGDOM.

Time: Monday, November 13, 2023, 2:51 PM - 3:14 PM

MIN17.04. Learning and using generalized attentional templates in the frontoparietal cortex

C. I. Jahn;

Princeton Neuroscience Institute, Princeton University, Princeton, NJ.

Time: Monday, November 13, 2023, 3:14 PM - 3:37 PM

MIN17.05. Probing the neural circuitry of representation learning with human iEEG

A. Radulescu;

Departments of Psychiatry and Neuroscience, Icahn School of Medicine at Mount Sinai, New York, NY.

Time: Monday, November 13, 2023, 3:37 PM - 4:00 PM

MIN17.06. Pressing a piano key, or playing a G note? Choice type impacts human reinforcement learning

M. Rmus;

Department of Psychology, University of California, Berkeley, Berkeley, CA.

Time: Monday, November 13, 2023, 4:00 PM - 4:23 PM

MIN17.07. Investigating the neural basis for transfer learning

A. Vaidya;

Department of Cognitive, Linguistic, and Psychological Sciences, National Institute on Drug Abuse, Baltimore, MD.

MIN18. Molecules and Memories: The Complex Underpinnings of Social Behavior - Jessica Walsh

Theme G – Motivation and Emotion

Location: WCC Ballroom A

Time: Monday, November 13, 2023, 2:00 PM - 4:30 PM

Description: Social behaviors constitute a complex array of inter-individual interactions that occur across species. Further, impairments in sociability are a common feature present in multiple neurodevelopmental, psychiatric, and substance use disorders. Traversing the landscape of social behaviors from multiple disciplines, this session will provide insight into novel discoveries investigating various model and modulatory systems, as well as potential therapeutic interventions for when these systems go awry.

Time: Monday, November 13, 2023, 2:00 PM - 4:30 PM

MIN18.01. Chair

J. J. Walsh;

Pharmacology, The University of North Carolina at Chapel Hill, Chapel Hill, NC.

Time: Monday, November 13, 2023, 2:00 PM - 4:30 PM

MIN18.02. Co Chair

X. Wu;

Hess CSM, Icahn School of Medicine at Mount Sinai, New York, NY.

Time: Monday, November 13, 2023, 2:05 PM - 2:28 PM

MIN18.03. The social brain and μ

C. Toddles;

University of Washington, Seattle, WA.

Time: Monday, November 13, 2023, 2:28 PM - 2:51 PM

MIN18.04. Social modulation of memory engrams

S. Ramirez;

Psychological & Brain Sciences, Boston University, Boston, MA.

Time: Monday, November 13, 2023, 2:51 PM - 3:14 PM

MIN18.05. The role of serotonin in social memory

X. Wu;

Neuroscience, Icahn School of Medicine at Mount Sinai, New York, NY.

Time: Monday, November 13, 2023, 3:14 PM - 3:37 PM

MIN18.06. Neural mechanisms underlying sustained enhancement of sociability

J. J. Walsh;

Pharmacology, The University of North Carolina at Chapel Hill, Chapel Hill, NC.

Time: Monday, November 13, 2023, 3:37 PM - 4:00 PM

MIN18.07. Nucleus accumbens dopamine release reflects the selective nature of pair bonds

Z. R. Donaldson;

Molecular, Cellular, & Developmental Biology; Psychology & Neuroscience, University of Colorado, Boulder, Boulder, CO.

Time: Monday, November 13, 2023, 4:00 PM - 4:23 PM

MIN18.08. Vasopressin and trans-primate social functioning

O. Oztan;

Stanford University, Stanford, CA.

MIN19. 3D-Imaging and 3D-Omics Technologies in Neuroscience - Ali Erturk

Theme I – Techniques

Location: WCC 151

Time: Tuesday, November 14, 2023, 9:30 AM - 12:00 PM

Description: This minisymposium will explore recent progress in tissue clearing and spatial omics and their potential impact on biomedical research. Topics to be covered include cutting-edge techniques for tissue clearing chemistry, high resolution fluorescence microscopy including

light-sheet imaging, spatial-omics, and their analysis using deep learning. The session will also focus on new approaches for combining 3D imaging with omics methods and their applications in neuroscience and drug development.

Time: Tuesday, November 14, 2023, 9:30 AM - 12:00 PM

MIN19.01. Chair

A. M. Erturk;

iTERM; Institute of Tissue Engineering and Regenerative Medicine, Helmholtz Munich, Munich, GERMANY.

Time: Tuesday, November 14, 2023, 9:30 AM - 12:00 PM

MIN19.02. Co Chair

L. Ye;

Scripps Research Institute, San Diego, CA.

Time: Tuesday, November 14, 2023, 9:35 AM - 9:58 AM

MIN19.03. Decipher spatial and cellular actions of small molecule drugs in situ through tissue clearing

L. Ye;

Scripps Research Institute, San Diego, CA.

Time: Tuesday, November 14, 2023, 9:58 AM - 10:21 AM

MIN19.04. From microscopy to omics and back

S. K. Saka;

European Molecular Biology Laboratory (EMBL), Heidelberg, GERMANY.

Time: Tuesday, November 14, 2023, 10:21 AM - 10:44 AM

MIN19.05. High-throughput whole-brain imaging for connectivity mapping of rodents and primates

F. Xu;

Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences, Shenzhen, CHINA.

Time: Tuesday, November 14, 2023, 10:44 AM - 11:07 AM

MIN19.06. Single-cell resolved 3D transcriptomics and translomics in the nervous system

X. Wang;

Broad Institute / MIT, Cambridge, MA.

Time: Tuesday, November 14, 2023, 11:07 AM - 11:30 AM

MIN19.07. Spatially resolved single-cell genomics and cell atlas of the brain

X. Zhuang;

HHMI / Harvard University, HHMI / Harvard University, Cambridge, MA.

Time: Tuesday, November 14, 2023, 11:30 AM - 11:53 AM

MIN19.08. Whole mouse DISCO clearing and DISCO-MS proteomics in neuroscience

A. M. Erturk;

Helmholtz Munich, Munich, GERMANY.

MIN20. Color Processing in the Early Visual System From Across Animal Taxa - Katrin Franke

Theme D – Sensory Systems

Location: WCC 145

Time: Tuesday, November 14, 2023, 9:30 AM - 12:00 PM

Description: Visual systems rely on color information for a variety of tasks, including foraging and capturing prey, identifying potential mates, and avoiding predators. How neural systems extract and process color information is not yet well understood. This session will highlight how advances in stimulus design, measurements of neural processing, and computational modeling have updated and enriched the field's understanding of early color processing in both vertebrate and invertebrate model organisms.

Time: Tuesday, November 14, 2023, 9:30 AM - 12:00 PM

MIN20.01. Chair

K. Franke;

Department of Neuroscience, Baylor College of Medicine, Houston, TX.

Time: Tuesday, November 14, 2023, 9:30 AM - 12:00 PM

MIN20.02. Co Chair

A. Vlasits;

Department of Neurobiology, Northwestern University, Evanston, IL.

Time: Tuesday, November 14, 2023, 9:35 AM - 9:58 AM

MIN20.03. Variable receptive field structures across cone types

T. Yoshimatsu;

Ophthalmology & Visual Sciences, Washington University in St. Louis School of Medicine, St. Louis, MO.

Time: Tuesday, November 14, 2023, 9:58 AM - 10:21 AM

MIN20.04. Color processing by populations of amacrine cell dendrites in the mouse retina

A. Vlasits;

Neurobiology, Northwestern University, Evanston, IL.

Time: Tuesday, November 14, 2023, 10:21 AM - 10:44 AM

MIN20.05. Color vision circuits for perception and behavior in the primate retina

S. S. Patterson;

University of Rochester, Rochester, NY.

Time: Tuesday, November 14, 2023, 10:44 AM - 11:07 AM

MIN20.06. Influences of color on mouse brain and behavioral activity

T. Brown;

Centre for Biological Timing, Faculty of Biology, Medicine and Health, University of Manchester, Manchester, UNITED KINGDOM.

Time: Tuesday, November 14, 2023, 11:07 AM - 11:30 AM

MIN20.07. Neural circuit mechanisms for the emergence of hue selective signals in the brain

R. Behnia;

Neuroscience, Columbia University, New York, NY.

Time: Tuesday, November 14, 2023, 11:30 AM - 11:53 AM

MIN20.07. Contrast polarity-invariant representations of color and luminance in macaque V1 and CNNs

L. M. Bun;

University of Washington, Seattle, WA.

MIN21. Novel Physiology of Arc/Arg3.1: From Viral-Like Capsids to Addiction - Angela Mabb

Theme B – Neural Excitability, Synapses, and Glia

Location: WCC Ballroom A

Time: Tuesday, November 14, 2023, 9:30 AM - 12:00 PM

Description: The immediate early gene, Arc, is a brain-enriched protein of viral origins pivotal for synaptic plasticity, learning, and memory. This session will: 1) Present updated work on Arc structure and function in the assembly and signaling as viral-like capsids; 2) Discuss new roles for Arc on neuronal plasticity, cell-to-cell communication, and intracellular regulation; 3) Discuss Arc as a possible molecular target for the treatment of cognitive impairment and addiction.

Time: Tuesday, November 14, 2023, 9:30 AM - 12:00 PM

MIN21.01. Chair

A. M. Mabb;

Neuroscience Institute, Georgia State University, Atlanta, GA.

Time: Tuesday, November 14, 2023, 9:35 AM - 9:58 AM

MIN21.02. Molecular physiology of Arc/Arg3.1: From Hub Protein to Retroviral-like Capsid

C. R. Bramham;

Biomedicine, University of Bergen, Bergen, NORWAY.

Time: Tuesday, November 14, 2023, 9:58 AM - 10:21 AM

MIN21.03. Viral-Like Signaling Regulates Synaptic Plasticity

T. Thomson;

Neurobiology, Chan Umass Medical School, Worcester, MA.

Time: Tuesday, November 14, 2023, 10:21 AM - 10:44 AM

MIN21.04. Investigating the role of Drosophila Arc in learning and sleep

S. J. Caron;

University of Utah, University of Utah, Salt Lake City, UT.

Time: Tuesday, November 14, 2023, 10:44 AM - 11:07 AM

MIN21.05. Arc intercellular signaling mediates non-cell autonomous synaptic plasticity

J. D. Shepherd;

University of Utah School of Medicine, University of Utah, Salt Lake City, UT.

Time: Tuesday, November 14, 2023, 11:07 AM - 11:30 AM

MIN21.06. Role of Arc ubiquitination in behavioral flexibility

A. M. Mabb;

Georgia State University, Georgia State University, Atlanta, GA.

Time: Tuesday, November 14, 2023, 11:30 AM - 11:53 AM

MIN21.07. Arc controls alcohol relapse by a central amygdala mechanism

K. Radwanska;

The Nencki Institute, Warsaw, POLAND.

MIN22. The Good, the Bad, and the Microglia: How Microglia Shape Brain Circuitry Across the Lifespan - Caroline Smith

Theme A – Development

Location: WCC Ballroom B

Time: Tuesday, November 14, 2023, 9:30 AM - 12:00 PM

Description: Stressors during pregnancy/early life have sex-specific effects on microglial development — ultimately increasing risk for psychiatric disorders. This session will show how environmental insults (immune, microbial, opioid) at different developmental stages affect microglia — leading to impaired neural circuit function and altered behavior. The minisymposium will take a lifespan approach, considering microglial function in pregnancy, as well as in offspring during neonatal, adolescent, and adult windows.

Time: Tuesday, November 14, 2023, 9:30 AM - 12:00 PM

MIN22.01. Chair

C. Smith;

Boston College, Boston College, Chestnut Hill, MA.

Time: Tuesday, November 14, 2023, 9:30 AM - 12:00 PM

MIN22.02. Co Chair

A. Ciernia;

Department of Biochemistry and Molecular Biology, University of British Columbia, Vancouver, BC, CANADA.

Time: Tuesday, November 14, 2023, 9:35 AM - 9:58 AM

MIN22.03. “Maternal microglia”: Effects of pregnancy and gestational stress on microglia-synaptic interactions, mood, and maternal behavior

K. M. Lenz;

Ohio State University Department of Psychology, The Ohio State University, Columbus, OH.

Time: Tuesday, November 14, 2023, 9:58 AM - 10:21 AM

MIN22.04. Prenatal immune stress blunts microglia reactivity leading to impaired striatal neurocircuit connectivity

L. Hayes;

Department of Neuroscience, Johns Hopkins University, Baltimore, MD.

Time: Tuesday, November 14, 2023, 10:21 AM - 10:44 AM

MIN22.05. Captopril suppresses microglia activation and ameliorate social deficits in a mouse model of Autism: Neuronal-microglia interaction

L. Brimberg;

The Feinstein Institute for Medical Research, The Feinstein Institutes for Medical Research, Manhasset, NY.

Time: Tuesday, November 14, 2023, 10:44 AM - 11:07 AM

MIN22.06. Early life microbiome driven inflammation impairs microglial development and function

A. Ciernia;

Department of Biochemical and Molecular Biology, University of British Columbia, Vancouver, BC, CANADA.

Time: Tuesday, November 14, 2023, 11:07 AM - 11:30 AM

MIN22.07. Prenatal opioid exposure inhibits microglial sculpting of the dopamine system selectively in adolescent male offspring.

C. Smith;

Department of Psychology and Neuroscience, Boston College, Chestnut Hill, MA.

Time: Tuesday, November 14, 2023, 11:30 AM - 11:53 AM

MIN22.08. Sex differences in microglial P2RY12 control of behavior

U. B. Eyo;

Department of Neuroscience, University of Virginia, Charlottesville, VA.

MIN23. Perceptual-Cognitive Integration for Coordinated Action in Naturalistic Environments - J Douglas Crawford

Theme E – Motor Systems

Location: WCC Ballroom B

Time: Tuesday, November 14, 2023, 2:00 PM - 4:30 PM

Description: The control of goal-directed actions requires integrating (bottom-up) perceptual information and (top-down) cognitive strategies. This minisymposium will highlight the use of eye tracking, neuroimaging, and motion tracking in studying complex human behaviors in natural and simulated environments. This translational approach will provide new insights into the complex interplay between perceptual, motor, and cognitive control in naturalistic tasks that are relevant for both basic and clinical research.

Time: Tuesday, November 14, 2023, 2:00 PM - 4:30 PM

MIN23.01. Chair

J. D. Crawford;

York University, York University, Toronto, ON, CANADA.

Time: Tuesday, November 14, 2023, 2:00 PM - 4:30 PM

MIN23.02. Co Chair

J. Fooker;

Queen's University, Queen's University, Kingston, ON, CANADA.

Time: Tuesday, November 14, 2023, 2:05 PM - 2:28 PM

MIN23.03. Adaptive Eye-Hand Coordination in Real-World Actions

J. Fooker;

Psychology, Queen's University, Kingston, ON, CANADA.

Time: Tuesday, November 14, 2023, 2:28 PM - 2:51 PM

MIN23.04. Gaze-dependent cortical activity patterns when intercepting a moving target

D. A. Barany;

University of Georgia, University of Georgia, Athens, GA.

Time: Tuesday, November 14, 2023, 2:51 PM - 3:14 PM

MIN23.05. Gaze Effects on Spatial Coding for Memory-Guided Action in Naturalistic Environments

B. R. Baltaretu;

Psychology, Justus-Liebig University Giessen, Giessen, GERMANY.

Time: Tuesday, November 14, 2023, 3:14 PM - 3:37 PM

MIN23.06. The Impact of Cortical Blindness and Compensatory Gaze Behavior on the Processing of Optic Flow for Head-Unconstrained Steering

G. J. Diaz;

Cognitive Science, Rochester Institute of Technology, Rochester, NY.

Time: Tuesday, November 14, 2023, 3:37 PM - 4:00 PM

MIN23.07. Saccades Interfere with Limb Motor Control in Continuous Tasks in Stroke Survivors

T. Singh;

Kinesiology, Pennsylvania State University, University Park, PA.

Time: Tuesday, November 14, 2023, 4:00 PM - 4:23 PM

MIN23.08. Understanding the Impact of Upper Limb Proprioceptive Impairments on Eye Movements in Chronic Stroke

J. A. Semrau;

Kinesiology and Applied Physiology, University of Delaware, Newark, DE.

MIN24. Behavioral Individuality as a Neuroscientific Variable - Libby Zhang

Theme F – Integrative Physiology and Behavior

Location: WCC 146AB

Time: Tuesday, November 14, 2023, 2:00 PM - 4:30 PM

Description: Behavioral responses across individuals are typically averaged together due to limitations in data availability and resolution. This introduces implicit assumptions of behavioral stereotypy, but increasing evidence points to behavior being idiosyncratic, arising from multiple biological sources and timescales, and reflecting similarly underappreciated inter-individual neural variability. This session will highlight scientific and technical advances in neuroethology at the level of the individual.

Time: Tuesday, November 14, 2023, 2:00 PM - 4:30 PM

MIN24.01. Chair

L. Zhang;

Stanford University, Stanford University, Redwood City, CA.

Time: Tuesday, November 14, 2023, 2:00 PM - 4:30 PM

MIN24.02. Co Chair

K. S. Chen;

Princeton Neuroscience Institute, Princeton, NJ.

Time: Tuesday, November 14, 2023, 2:05 PM - 2:28 PM

MIN24.03. The evolutionary origins of behavioral individuality

B. De Bivort;

Organismic and Evolutionary Biology, Harvard University, Cambridge, MA.

Time: Tuesday, November 14, 2023, 2:28 PM - 2:51 PM

MIN24.04. Behavioral individuality in *Drosophila* – being unique starts with a uniquely developed brain

G. Linneweber;

Biology, Freie Universität Berlin, Berlin, GERMANY.

Time: Tuesday, November 14, 2023, 2:51 PM - 3:14 PM

MIN24.05. Predicting behavioral variability from visually-evoked neural activity across the zebrafish brain

E. A. Naumann;

Duke University School of Medicine, Duke University, Durham, NC.

Time: Tuesday, November 14, 2023, 3:14 PM - 3:37 PM

MIN24.06. Dopamine drives inter-individual variability in mouse social strategies

C. Solié;

Brain Plasticity, Ecole Supérieure de Physique et Chimie Industrielle - Paris Science Lettre Research University - CNRS, Paris, FRANCE.

Time: Tuesday, November 14, 2023, 3:37 PM - 4:00 PM

MIN24.07. Characterizing brain-phenotype relationships in health and disease

A. S. Greene;

School of Medicine, Yale, New Haven, CT.

Time: Tuesday, November 14, 2023, 4:00 PM - 4:23 PM

MIN24.08. Who cares? Mechanisms of parental care plasticity in poison frogs

E. K. Fischer;

University of Illinois at Urbana-Champaign, Urbana, IL.

MIN25. Translational Research in Autism Spectrum Disorder (ASD): Preclinical Development and Clinical Implementation - Peng Jin

Theme A – Development

Location: WCC 143

Time: Tuesday, November 14, 2023, 2:00 PM - 4:30 PM

Description: This session will focus on autism spectrum disorder (ASD), which is characterized by many symptoms including impairments in behavior and brain plasticity. ASD manifests from an early age and is diagnosed in 1 in 160 children worldwide. Despite advancements in the understanding of genetic causes of ASD, there is no approved targeted therapeutic intervention. This panel features renowned specialists studying syndromes with a high prevalence of ASD from a translational perspective.

Time: Tuesday, November 14, 2023, 2:00 PM - 4:30 PM

MIN25.01. Chair

P. Jin;

Emory University School of Medicine, Emory University, Atlanta, GA.

Time: Tuesday, November 14, 2023, 2:00 PM - 4:30 PM

MIN25.02. Co Chair

B. Bardoni;

CNRS UMR7275 – Institut de Pharmacologie Moléculaire et Cellulaire, Valbonne, FRANCE.

Time: Tuesday, November 14, 2023, 2:05 PM - 2:28 PM

MIN25.03. Developing human brain organoid model for fragile X syndrome

P. Jin;

Emory University School of Medicine, Emory University, Atlanta, GA.

Time: Tuesday, November 14, 2023, 2:28 PM - 2:51 PM

MIN25.04. Multiple approaches to identify novel and effective treatments for Fragile X syndrome

B. Bardoni;

CNRS UMR7275 – Institut de Pharmacologie Moléculaire et Cellulaire, Valbonne, FRANCE.

Time: Tuesday, November 14, 2023, 2:51 PM - 3:14 PM

MIN25.05. Myelination deficits as a mechanism underlying auditory issues in Fragile X syndrome

E. A. McCullagh;

Oklahoma State University, Oklahoma State University, Stillwater, OK.

Time: Tuesday, November 14, 2023, 3:14 PM - 3:37 PM

MIN25.06. Striatum and fragile x syndrome: from troubles in translation to new perspectives

F. Longo;

Gothenburg University, University of Gothenburg, Gothenburg, SWEDEN.

Time: Tuesday, November 14, 2023, 3:37 PM - 4:00 PM

MIN25.07. Cannabidiol as a treatment for Autism Spectrum Disorder

I. Gantois;

Biochemistry, McGill University, Montreal, QC, CANADA.

Time: Tuesday, November 14, 2023, 4:00 PM - 4:23 PM

MIN25.08. Multiomic network analysis of the developmental proteome in patient-derived organoid models of FXS and other NDDs

N. Raj;

Emory University, Atlanta, GA.

MIN26. New Insights Into Senescence-Associated Mechanisms Influencing CNS Dysfunction - Miranda Orr

Theme C – Neurodegenerative Disorders and Injury

Location: WCC Ballroom A

Time: Tuesday, November 14, 2023, 2:00 PM - 4:30 PM

Description: Cellular senescence is a stress-induced fate characterized by cell cycle arrest and production of an inflammatory secretome. Accumulating in the brain and periphery, senescent cells influence central nervous system pathologies including Alzheimer's disease, Parkinson's disease, tauopathy, glioblastoma, and alcohol use disorder. This minisymposium will feature breakthroughs in understanding the roles of senescent cells in the brain through use of gold-standard and emerging technologies, models, and therapeutic interventions.

Time: Tuesday, November 14, 2023, 2:00 PM - 4:30 PM

MIN26.01. Chair

M. E. Orr;

Wake Forest School of Medicine, Wake Forest University School of Medicine, Winston-Salem, NC.

Time: Tuesday, November 14, 2023, 2:00 PM - 4:30 PM

MIN26.02. Co Chair

M. J. Schafer;

Marissa Schafer, Mayo Clinic, Rochester, MN.

Time: Tuesday, November 14, 2023, 2:05 PM - 2:28 PM

MIN26.03. Cellular senescence in malignant cells promotes tumor progression in mouse and patient Glioblastoma

I. Le Roux;

Genetics and Development of Brain Tumor, ICM - Institut du Cerveau - Paris Brain Institute, Paris, FRANCE.

Time: Tuesday, November 14, 2023, 2:28 PM - 2:51 PM

MIN26.04. Decoding the Impact of GBA on Cellular Senescence in Dopaminergic Neurons in Parkinson's Disease

M. Riessland;

Stony Brook University, Stony Brook University, Stony Brook, NY.

Time: Tuesday, November 14, 2023, 2:51 PM - 3:14 PM

MIN26.05. Increased senescence is associated with α -synucleinopathy in the TgA53T mouse model and senolytic treatment delays disease onset

I. Poddar;

Pediatrics and Biochemistry and Molecular Biology, University of Minnesota, Twin Cities, Falcon Heights, MN.

Time: Tuesday, November 14, 2023, 3:14 PM - 3:37 PM

MIN26.06. Chronic alcohol metabolism, DNA repair infidelity and cell cycle-induced senescence in neurons

K. H. Chow;

The Chinese University of Hong Kong, School of Life Sciences, Gerald Choa Neuroscience Institute, The Chinese University of Hong Kong, Hong Kong, HONG KONG.

Time: Tuesday, November 14, 2023, 3:37 PM - 4:00 PM

MIN26.07. Probing senescence in mouse models of neurodegeneration

D. J. BAKER, PhD;

Pediatrics and Biochemistry and Molecular Biology, Mayo Clinic, Rochester, MN.

Time: Tuesday, November 14, 2023, 4:00 PM - 4:23 PM

MIN26.08. Translating senolytic therapy from mouse models of neurodegeneration to early stage clinical trials

V. R. Garbarino;

The Glenn Biggs Institute for Alzheimer's & Neurodegenerative Diseases, Glenn Biggs Institute for Alzheimer's and Neurodegenerative Diseases, UTHealth San Antonio, San Antonio, TX.

MIN27. Current Status and Future Strategies for Advancing Functional Circuit Mapping *In Vivo* - Paul Slesinger

Theme I – Techniques

Location: WCC 151

Time: Tuesday, November 14, 2023, 2:00 PM - 4:30 PM

Description: Brain function relies on tightly-regulated signaling via biomolecules such as neurotransmitters and modulators released and received by a heterogeneous network of neuronal cell types. This minisymposium showcases the latest advances in functional circuit mapping *in vivo* by combining cell-specific imaging, genetically encoded biosensors, photo-releasable neuromodulators, and CRISPR-based genetic manipulations. It will present strategies for developing, utilizing, and disseminating these tools.

Time: Tuesday, November 14, 2023, 2:00 PM - 4:30 PM

MIN27.01. Chair

P. A. Slesinger;

Dept. of Neuroscience, Icahn School of Medicine at Mount Sinai, New York, NY.

Time: Tuesday, November 14, 2023, 2:00 PM - 4:30 PM

MIN27.02. Co Chair

A. Berndt;

Department of Bioengineering, University of Washington, Seattle, WA.

Time: Tuesday, November 14, 2023, 2:05 PM - 2:28 PM

MIN27.03. What genetically encoded sensors teach us about neuropeptide signaling

L. Tian;

Department of Biochemistry and Molecular Medicine, University of California, Davis, DAVIS, CA.

Time: Tuesday, November 14, 2023, 2:28 PM - 2:51 PM

MIN27.04. Monitoring the neurophysiology of addiction and reward with genetically encoded opioid sensors

A. Berndt;

Department of Bioengineering, University of Washington, Seattle, WA.

Time: Tuesday, November 14, 2023, 2:51 PM - 3:14 PM

MIN27.05. Next generation of photo-releasable modulators using photoswitchable lipids

J. Taura;

Department of Neuroscience, Icahn School of Medicine At M.Sinai, New York, NY.

Time: Tuesday, November 14, 2023, 3:14 PM - 3:37 PM

MIN27.06. Visualizing the tug of war between memory ensemble stability and fluidity with a novel open-source dual channel Miniscope

D. J. Cai;

Mount Sinai, New York, NY.

Time: Tuesday, November 14, 2023, 3:37 PM - 4:00 PM

MIN27.07. CRISPR-Cas9 gene-editing approaches to understand neural circuit function and behavior

B. Juarez;

Dept. Anatomy and Neurobiology, University of Maryland-Baltimore, Baltimore, MD.

Time: Tuesday, November 14, 2023, 4:00 PM - 4:23 PM

MIN27.08. Molecular tools for recording intracellular neural activity

A. E. Cohen;

Depts. of Chemistry and Chemical Biology and of Physics, Harvard University, CAMBRIDGE, MA.

MIN28. Cognitive and Affective Functions of the Cerebellum - Diasynou Fioravante

Theme H – Cognition

Location: WCC 143

Time: Wednesday, November 15, 2023, 9:30 AM - 12:00 PM

Description: The tenet that the cerebellum solely constitutes a motor structure has recently been challenged by compelling evidence for the cerebellum's role in cognitive and affective functions and associated disorders. By discussing new advances in mapping cerebellar function in cognitive, social and affective processing, and reviewing its role in neuropathology beyond the motor domain, this minisymposium will establish an emerging overarching perspective of cerebellar contributions to cognition and affect.

Time: Wednesday, November 15, 2023, 9:30 AM - 12:00 PM

MIN28.01. Chair

D. Fioravante;

UC Davis Neuroscience, UC Davis Neuroscience, Davis, CA.

Time: Wednesday, November 15, 2023, 9:30 AM - 12:00 PM

MIN28.02. Co Chair

S. Rudolph;

Albert Einstein College of Medicine, New York, NY.

Time: Wednesday, November 15, 2023, 9:35 AM - 9:58 AM

MIN28.03. Neocortex-cerebellum learning algorithms

M. J. Wagner;

NINDS, NIH, Bethesda, MD.

Time: Wednesday, November 15, 2023, 9:58 AM - 10:21 AM

MIN28.04. Critical periods of development in cerebellar-mediated cognitive and social behavior

J. L. Verpeut;

Arizona State University, Arizona State University, Tempe, AZ.

Time: Wednesday, November 15, 2023, 10:21 AM - 10:44 AM

MIN28.05. Role of the cerebellum in autism spectrum disorder - what can we learn about cerebellar affective functions from monogenic autism-risk mutations

A. M. Badura;

Erasmus MC, Erasmus MC, Rotterdam, NETHERLANDS.

Time: Wednesday, November 15, 2023, 10:44 AM - 11:07 AM

MIN28.06. Social memory deficit caused by dysregulation of the cerebellar vermis

Y. Yang;

University of Minnesota, Duluth, MN.

Time: Wednesday, November 15, 2023, 11:07 AM - 11:30 AM

MIN28.07. Cerebellar circuits for extinction learning

D. Fioravante;

UC Davis Neuroscience, UC Davis Neuroscience, Davis, CA.

Time: Wednesday, November 15, 2023, 11:30 AM - 11:53 AM

MIN28.08. Diagnosing Cerebellar Cognitive Affective Syndrome - current options and future directions

A. Thieme;

Essen University Hospital, Essen, GERMANY.

MIN29. Neurobiology and Changing Ecosystems: Mechanisms Underlying Responses to Human-Generated Environmental Impacts - Gabrielle Gutierrez

Theme F – Integrative Physiology and Behavior

Location: WCC 151

Time: Wednesday, November 15, 2023, 9:30 AM - 12:00 PM

Description: Human generated environmental change affects organisms that reside across diverse environments. Though nervous systems evolved to sense and respond to environmental change, it is unclear whether the rapid rate of environmental change outpaces the adaptive capacity of complex nervous systems. This session explores the neurobiology underlying adaptive and plastic responses to changing environments including those induced by climate change, pollution, and other human-caused environmental perturbations.

Time: Wednesday, November 15, 2023, 9:30 AM - 12:00 PM

MIN29.01. Chair

G. J. Gutierrez;

Barnard College, Columbia University, New York, NY.

Time: Wednesday, November 15, 2023, 9:30 AM - 12:00 PM

MIN29.02. Co Chair

A. Michael;

The Kavli Foundation, The Kavli Foundation, Culver City, CA.

Time: Wednesday, November 15, 2023, 9:35 AM - 9:58 AM

MIN29.03. Surviving in a warming world: alteration in neural function during heat stress.

F. Kermen;

University of Copenhagen, Copenhagen, DENMARK.

Time: Wednesday, November 15, 2023, 9:58 AM - 10:21 AM

MIN29.04. Neuropeptide regulation of mosquito blood-feeding and mating behaviors

L. Duvall;

Columbia University, New York, NY.

Time: Wednesday, November 15, 2023, 10:21 AM - 10:44 AM

MIN29.05. Neurobiology of seasonal migration of monarch butterflies in changing environments

C. Merlin;

Texas A, Texas A&M University, College Station, TX.

Time: Wednesday, November 15, 2023, 10:44 AM - 11:07 AM

MIN29.06. Differential Effects of Light at Night on Circadian Clock Mutant Sleep/Wake Cycles

M. Fernandez;

Lab, Barnard College of Columbia University, NYC, NY.

Time: Wednesday, November 15, 2023, 11:07 AM - 11:30 AM

MIN29.07. Avian acoustic communication in anthropogenically changing environments

T. M. Anttonen;

University of Southern Denmark, Odense, DENMARK.

Time: Wednesday, November 15, 2023, 11:30 AM - 11:53 AM

MIN29.08. Tracking the effects of temperature perturbations in neuronal models: a data-driven approach

T. B. Burghi;

University of Cambridge, Cambridge, UNITED KINGDOM.

MIN30. Corticospinal Circuit Structure and Function - Anders Nelson

Theme E – Motor Systems

Location: WCC Ballroom A

Time: Wednesday, November 15, 2023, 9:30 AM - 12:00 PM

Description: Corticospinal neurons are a primary output of the sensorimotor cortex that shape movement through their direct projections to the spinal cord and collateral innervation of myriad brain regions. Yet the structure and function of corticospinal neurons remain largely uncharted. This session will highlight recent breakthroughs in our understanding of the organizational principles of the corticospinal pathway, what information is encoded in its activity, and how that activity shapes movement.

Time: Wednesday, November 15, 2023, 9:30 AM - 12:00 PM

MIN30.01. Chair

A. Nelson;

Center for Neural Science, New York University, New York, NY.

Time: Wednesday, November 15, 2023, 9:30 AM - 12:00 PM

MIN30.02. Co Chair

A. Miri;

Department of Neurobiology, Northwestern University, Evanston, IL.

Time: Wednesday, November 15, 2023, 9:35 AM - 9:58 AM

MIN30.03. Transcriptomic and functional characterization of brain-wide spinal projecting neurons

C. C. Winter;

Kirby Neurobiology Center, Boston Children's Hospital / Harvard Medical School, Boston, MA.

Time: Wednesday, November 15, 2023, 9:58 AM - 10:21 AM

MIN30.04. Mapping corticospinal connections with spinal circuits

S. Fageiry;

Neurological surgery, University of Louisville, Louisville, KY.

Time: Wednesday, November 15, 2023, 10:21 AM - 10:44 AM

MIN30.05. Corticospinal circuits for dexterous oromanual manipulation during food handling

J. M. Barrett;

Department of Neuroscience, Northwestern University, Chicago, IL.

Time: Wednesday, November 15, 2023, 10:44 AM - 11:07 AM

MIN30.06. Corticospinal neurons in the execution of goal-appropriate actions

I. Duguid;

Centre for Discovery Brain Sciences, University of Edinburgh, Edinburgh, UNITED KINGDOM.

Time: Wednesday, November 15, 2023, 11:07 AM - 11:30 AM

MIN30.07. The Corticospinal Projectome in Rats and Monkeys: Implications for Regeneration

E. Sinopoulou;

NY.

Time: Wednesday, November 15, 2023, 11:30 AM - 11:53 AM

MIN30.08. Dysfunction of corticomotoneuronal connections in ALS mouse models

Y. Yoshida;

Burke Neurological Institute, Weill Cornell Medicine, White Plains, NY.

MIN31. Odor Identity Coding in the Vertebrate Olfactory System - Ron Yu

Theme D – Sensory Systems

Location: WCC 146AB

Time: Wednesday, November 15, 2023, 9:30 AM - 12:00 PM

Description: Odor information is processed by at least five cortical areas with extensive feedforward, feedback, and reciprocal connections. The neural representations must be robust to achieve stable decoding under various conditions, across concentrations, and in the presence of extrinsic and intrinsic noises. How odors are represented to permit reliable perception remains an open question. This session will explore the latest findings on how odor representations are generated and maintained.

Time: Wednesday, November 15, 2023, 9:30 AM - 12:00 PM

MIN31.01. Chair

R. Yu;

Stowers Institute For Medical Research, Stowers Institute For Medical Research, Kansas City, MO.

Time: Wednesday, November 15, 2023, 9:30 AM - 12:00 PM

MIN31.02. Co Chair

D. F. Albeanu;

Cold Spring Harbor Laboratory, Cold Spring Harbor Laboratory, Cold Spring Harbor, NY.

Time: Wednesday, November 15, 2023, 9:35 AM - 9:58 AM

MIN31.03. Representing odours to guide behavior: context-dependent modulations in the olfactory bulb

I. Fukunaga;

OIST Graduate School, OIST Graduate School, Okinawa, JAPAN.

Time: Wednesday, November 15, 2023, 9:58 AM - 10:21 AM

MIN31.04. Comparison of odor coding in the olfactory bulb and two olfactory cortices

R. Haddad;

bar ilan university, Bar Ilan University, Ramat Gan, ISRAEL.

Time: Wednesday, November 15, 2023, 10:21 AM - 10:44 AM

MIN31.05. Assembly formation and odor representation in piriform cortex

A. M. Oswald;

Neurobiology, University of Chicago, Chicago, IL.

Time: Wednesday, November 15, 2023, 10:44 AM - 11:07 AM

MIN31.06. A systematic approach to quantify the contribution of individual glomeruli to olfactory percepts

W. G. Bast;

Cold Spring Harbor Laboratory, Cold Spring Harbor Laboratory, Cold Spring Harbor, NY.

Time: Wednesday, November 15, 2023, 11:07 AM - 11:30 AM

MIN31.07. A Dimensionally Expanded Representational Model of Invariant Object and Odor Coding

R. Raj;

Stowers Institute For Medical Research, Stowers Institute For Medical Research, Kansas City, MO.

Time: Wednesday, November 15, 2023, 11:30 AM - 11:53 AM

MIN31.08. Experience-dependent odor representations in a balanced recurrent network

R. W. Friedrich;

Friedrich-Miescher-Institute For Biomed Res, Friedrich-Miescher-Institute For Biomed Res, Basel, SWITZERLAND.

MIN32. Chloride Regulation in Disease States - Sahara Khademullah

Theme B – Neural Excitability, Synapses, and Glia

Location: WCC 145

Time: Wednesday, November 15, 2023, 9:30 AM - 12:00 PM

Description: Aberrant chloride (Cl⁻) homeostasis results in alterations in neuronal transmission thereby leading to a variety of neurological conditions. This session will outline the role that Cl⁻ regulation plays in neurological disease, particularly degenerative disease states, such as amyotrophic lateral sclerosis (ALS), Alzheimer's disease (AD), Huntington's disease (HD), and epilepsy. Emerging advances in targeting Cl⁻ as a means to develop new therapeutics and clinical trial design will also be highlighted.

Time: Wednesday, November 15, 2023, 9:30 AM - 12:00 PM

MIN32.01. Chair

S. Khademullah;

CERVO Brain Research Center, Université Laval, Québec City, QC, CANADA.

Time: Wednesday, November 15, 2023, 9:35 AM - 9:58 AM

MIN32.02. Displacement of extracellular chloride by sulfated glycosaminoglycans of the brain's extracellular matrix

K. P. Normoyle;

Massachusetts General Hospital, Massachusetts General Hospital / Harvard Medical School, Boston, MA.

Time: Wednesday, November 15, 2023, 9:58 AM - 10:21 AM

MIN32.03. KCC2 drives chloride microdomain formation in dendritic blebbing

N. L. Weilinger;

Centre For Brain Health, Centre For Brain Health / UBC, Vancouver, BC, CANADA.

Time: Wednesday, November 15, 2023, 10:21 AM - 10:44 AM

MIN32.04. Enhancing KCC2 function reduces interictal activity and prevents seizures in mesial temporal lobe epilepsy

F. Donneger;

Institut du Fer à Moulin - Inserm Sorbonne University UMR-S 1270, Sorbonne University, Paris, FRANCE.

Time: Wednesday, November 15, 2023, 10:44 AM - 11:07 AM

MIN32.05. Chloride dysregulation and impaired GABAergic signaling due to cation-chloride cotransporter dysfunction in Huntington's disease

M. A. Serranilla;

University of Toronto, University of Toronto, Toronto, ON, CANADA.

Time: Wednesday, November 15, 2023, 11:07 AM - 11:30 AM

MIN32.06. Restoring neuronal chloride extrusion reverses cognitive decline linked to Alzheimer's disease mutations

I. Keramidis;

CERVO Brain Research Centre, Quebec City, QC, CANADA.

Time: Wednesday, November 15, 2023, 11:30 AM - 11:53 AM

MIN32.07. Pharmacologically restoring neuronal chloride extrusion delays disease progression and prolongs survival in amyotrophic lateral sclerosis

S. Khademullah;

CERVO Brain Research Center, Laval University, Quebec City, QC, CANADA.

MIN33. Brainstem Mechanisms of Motor Control - Marie-Claude Perreault

Theme E – Motor Systems

Location: WCC 151

Time: Wednesday, November 15, 2023, 2:00 PM - 4:30 PM

Description: The brainstem is a brain region of prime importance for survival as it harbors not only neural networks producing vital motor functions but also mechanisms for their coordination. Scientists are now making great strides in mapping the circuits of these coordinating mechanisms. This session showcases early career scientists studying oculo- and respiratory-locomotor coordination, orofacial motor, and cardiorespiratory coupling to outline emerging ideas on brainstem contributions to motor control.

Time: Wednesday, November 15, 2023, 2:00 PM - 4:30 PM

MIN33.01. Chair

M. Perreault;

Cell Biology, Emory University, Atlanta, GA.

Time: Wednesday, November 15, 2023, 2:00 PM - 4:30 PM

MIN33.02. Co Chair

M. Thoby Brisson;

Université De Bordeaux, CNRS UMR 5287, INCIA, Université De Bordeaux, CNRS UMR 5287, Bordeaux Cedex, FRANCE.

Time: Wednesday, November 15, 2023, 2:05 PM - 2:28 PM

MIN33.03. Interactive balance between locomotor and vestibular signals in gaze stabilization

F. M. Lambert;

DN3 team, INCIA CNRS UMR5287, Université de Bordeaux, Bordeaux, FRANCE.

Time: Wednesday, November 15, 2023, 2:28 PM - 2:51 PM

MIN33.04. A hypothalamus-brainstem neuronal network for oxytocinergic amplification of cardiorespiratory coupling: implication for socio-emotional behaviors?

J. Buron;

Institut de Neurobiologie de la Méditerranée (Muscatelli-Bossy/Menuet Laboratory), INSERM, Aix-Marseille University, Marseille, FRANCE.

Time: Wednesday, November 15, 2023, 2:51 PM - 3:14 PM

MIN33.05. Brainstem circuitry and cellular mechanisms contributing to integration of cortical and sensory information in orofacial movements.

D. Falardeau;

CIRCA and Department of Neuroscience (Kolta Laboratory), University of Montreal, Montreal, QC, CANADA.

Time: Wednesday, November 15, 2023, 3:14 PM - 3:37 PM

MIN33.06. Investigation of medullary circuits responsible for swallow-breathing coordination

A. Huff;

Center for Integrative Brain Research, Seattle Children's Research Institute, Seattle, WA.

Time: Wednesday, November 15, 2023, 3:37 PM - 4:00 PM

MIN33.07. Steering the brainstem in a new direction: modular organization of reticulospinal motor circuits

J. Bouvier;

Paris-Saclay Institute of Neuroscience, CNRS, University Paris-Saclay, Paris, FRANCE.

Time: Wednesday, November 15, 2023, 4:00 PM - 4:23 PM

MIN33.08. Basal ganglia-brainstem pathways for motor control

L. E. McElvain;

Department of Biological Sciences, University of Southern California, Los Angeles, CA.

**MIN34. Neural Circuit Transitions Supporting Developmentally-Specific Social Behavior
- Maya Opendak**

Theme A – Development

Location: WCC 145

Time: Wednesday, November 15, 2023, 2:00 PM - 4:30 PM

Description: For many species, flexible social behavior is critical for access to critical resources, such as food, protection, and mates. Flexibility is particularly important in early life, when environmental demands are in constant flux. However, the neural circuit mechanisms that support developmental transitions in social behavior are poorly understood. This session will highlight recent advances in our understanding of circuits supporting age-appropriate social behavior from infancy through adulthood.

Time: Wednesday, November 15, 2023, 2:00 PM - 4:30 PM

MIN34.01. Chair

M. Opendak;

Neuroscience, Kennedy Krieger Institute, Baltimore, MD.

Time: Wednesday, November 15, 2023, 2:05 PM - 2:28 PM

MIN34.02. Emergent role of the lateral habenula in social action selection across infancy

M. Opendak;

Kennedy Krieger Institute, Kennedy Krieger Institute, Baltimore, MD.

Time: Wednesday, November 15, 2023, 2:28 PM - 2:51 PM

MIN34.03. Oxytocin-mediated neural circuits underlying the emergence of social touch

A. Che;

Yale University, New Haven, CT.

Time: Wednesday, November 15, 2023, 2:01 PM - 2:24 PM

MIN34.04. Basomedial amygdala maturation and regulation of adolescent social interaction

N. C. Ferrara;

Rosalind Franklin University of Medicine and Science, Rosalind Franklin University of Medicine and Science, North Chicago, IL.

Time: Wednesday, November 15, 2023, 2:24 PM - 2:47 PM

MIN34.05. Neurodevelopment of collective behavior in schooling fish

M. Lovett-Barron;

University of California, San Diego, University of California, San Diego, La Jolla, CA.

Time: Wednesday, November 15, 2023, 2:47 PM - 3:10 PM

MIN34.06. Steroid hormone-sensitive neurons in the paraventricular thalamus enhance out-group, but not in-group, aggression in mice.

B. A. Briones;

University of Washington, Seattle, WA.

Time: Wednesday, November 15, 2023, 3:10 PM - 3:33 PM

MIN34.07. Neural circuits underlying social dominance

N. Padilla-Coreano;

University of Florida, Gainesville, FL.

MIN35. Astrocytes as Drivers and Disruptors of Behavior: New Advances in Basic Mechanisms and Therapeutic Targeting - Anna Orr

Theme B – Neural Excitability, Synapses, and Glia

Location: WCC Ballroom C

Time: Wednesday, November 15, 2023, 2:00 PM - 4:30 PM

Description: Astrocytes are emerging as crucial regulators of behavior and potential therapeutic targets for neurocognitive and neuropsychiatric disorders. This minisymposium will focus on new advances in the roles of astrocytes in different behavioral domains, address molecular and circuit mechanisms, functional heterogeneity, sex differences, and highlight potential astrocyte-targeted therapeutic strategies to alleviate behavioral and cognitive impairments in disease.

Time: Wednesday, November 15, 2023, 2:00 PM - 4:30 PM

MIN35.01. Chair

A. G. Orr;

Brain and Mind Research Institute, Weill Cornell Medicine, New York, NY.

Time: Wednesday, November 15, 2023, 2:05 PM - 2:28 PM

MIN35.02. Astrocytes Close the Critical Period for Visual Plasticity

G. Dallerac;

Paris-Saclay Institute for Neurosciences, Paris-Saclay University, Paris, FRANCE.

Time: Wednesday, November 15, 2023, 2:28 PM - 2:51 PM

MIN35.03. Astrocytic control of dendritic integration and spatial learning

K. Bohmbach;

Institute of Cellular Neurosciences, University of Bonn, Medical School, Bonn, GERMANY.

Time: Wednesday, November 15, 2023, 2:51 PM - 3:14 PM

MIN35.04. Specific Contributions of Astrocyte Signaling to Behavior

J. Nagai;

RIKEN Center for Brain Science, Saitama, JAPAN.

Time: Wednesday, November 15, 2023, 3:14 PM - 3:37 PM

MIN35.05. Oxytocin, Astrocytes, and Amygdala: A Triptych for Emotional Adaptation?

A. Charlet;

Institute of Cellular and Integrative Neuroscience, CNRS, Strasbourg, FRANCE.

Time: Wednesday, November 15, 2023, 3:37 PM - 4:00 PM

MIN35.06. Context-Dependent Roles of Astrocytes in Cognitive Decline

A. G. Orr;

Brain and Mind Research Institute, Weill Cornell Medicine, New York, NY.

Time: Wednesday, November 15, 2023, 4:00 PM - 4:23 PM

MIN35.07. Astrocytic Urea Cycle Detoxifies Abeta-Derived Ammonia While Impairing Memory in Alzheimer's Disease

Y. Ju;

Brain Science Institute, Departments of Psychiatry and Neuroscience, University of Texas Austin Dell Medical School, Austin, TX.

MIN36. New Developments in Technologies for Neuromodulation -Huiliang Wang

Theme I – Techniques

Location: WCC Ballroom A

Time: Wednesday, November 15, 2023, 2:00 PM - 4:30 PM

Description: The future of neural modulation technologies will leverage multi-modal approaches, together with the design in both device hardware and algorithms to enable targeted stimulation with minimum invasiveness. These methodology developments enable new applications in both investigating neural function and developing therapies for neurological diseases. This minisymposium will present the cutting-edge developments and applications of the novel approaches in modulating of neural activity.

Time: Wednesday, November 15, 2023, 2:00 PM - 4:30 PM

MIN36.01. Chair

H. Wang;

University of Texas at Austin, University Of Texas At Austin Institute For Neuroscience, Austin, TX.

Time: Wednesday, November 15, 2023, 2:00 PM - 4:30 PM

MIN36.02. Co Chair

S. Rao;

University of Massachusetts, Amherst, Amherst, MA.

Time: Wednesday, November 15, 2023, 2:05 PM - 2:28 PM

MIN36.03. Ultrasound triggered liposome light source for noninvasive optogenetics

H. Wang;

University of Texas at Austin, University Of Texas At Austin Institute For Neuroscience, Austin, TX.

Time: Wednesday, November 15, 2023, 2:28 PM - 2:51 PM

MIN36.04. Novel methods of kilohertz-frequency neuromodulation for neural inactivation

E. Peña;

Duke University, Duke University, Chapel Hill, NC.

Time: Wednesday, November 15, 2023, 2:51 PM - 3:14 PM

MIN36.05. Magnetic modulation for targeted neural circuits

S. Rao;

UNIVERSITY OF MASSACHUSETTS, AMHERST, UNIVERSITY OF MASSACHUSETTS, AMHERST, Amherst, MA.

Time: Wednesday, November 15, 2023, 3:14 PM - 3:37 PM

MIN36.06. Non-invasive peripheral nerve stimulation with temporal Interference and optoelectronics

M. J. Donahue;

Linköpings Universitet, Norrköping, SWEDEN.

Time: Wednesday, November 15, 2023, 3:37 PM - 4:00 PM

MIN36.07. Soft and stretchable organic bioelectronics for precision neuromodulation

Y. Jiang;

University of Pennsylvania, Philadelphia, PA.

Time: Wednesday, November 15, 2023, 4:00 PM - 4:23 PM

MIN36.08. Subdermally implanted wireless, battery-free interfaces to the central nervous system for chronic interrogation of freely behaving subjects

P. Gutruf;

University of Arizona, Tucson, AZ.

MIN37. Rethinking Remapping: Circuit Mechanisms of Recovery After Stroke - William Zeiger

Theme C – Neurodegenerative Disorders and Injury

Location: WCC 146AB

Time: Wednesday, November 15, 2023, 2:00 PM - 4:30 PM

Description: Stroke is one of the most common neurologic disorders and a major cause for disability. Development of therapeutics to improve recovery has been hindered, in part, due to a limited understanding of how circuits within the central nervous system are affected by stroke and how they change throughout recovery. This symposium will highlight recent work across multiple species, using diverse approaches, to understand the circuit mechanisms underlying disability and recovery after stroke.

Time: Wednesday, November 15, 2023, 2:00 PM - 4:30 PM

MIN37.01. Chair

W. Zeiger;

University of California Los Angeles, University of California Los Angeles, Los Angeles, CA.

Time: Wednesday, November 15, 2023, 2:00 PM - 4:30 PM

MIN37.02. Co Chair

P. E. Turkeltaub;

Georgetown University, Georgetown University, Washington, DC.

Time: Wednesday, November 15, 2023, 2:05 PM - 2:28 PM

MIN37.03. The role of Parvalbumin interneurons in regulating peri-infarct circuit remapping after stroke

B. Campos;

University of California, Los Angeles, University of California, Los Angeles, Los Angeles, CA.

Time: Wednesday, November 15, 2023, 2:28 PM - 2:51 PM

MIN37.04. Functional allocation in stroke recovery

M. T. Joy;

The Jackson Laboratory, Bar Harbor, ME.

Time: Wednesday, November 15, 2023, 2:51 PM - 3:14 PM

MIN37.05. Bistability of movement-related beta-power and spike population in non-human primate motor areas

H. Choi;

Hoseok Choi, UCSF, Davis, CA.

Time: Wednesday, November 15, 2023, 3:14 PM - 3:37 PM

MIN37.06. Right-hemisphere cognition in chronic right-hemisphere stroke - what's left?

A. Seydell-Greenwald;

Georgetown University Medical Center, Washington, DC.

Time: Wednesday, November 15, 2023, 3:37 PM - 4:00 PM

MIN37.07. Absence of perilesional neuroplastic recruitment in chronic post-stroke aphasia

A. T. Demarco;

Department of Rehabilitation Medicine, Georgetown University, Washington, DC.

Time: Wednesday, November 15, 2023, 4:00 PM - 4:23 PM

MIN37.08. Developing real-time personalized brain state-dependent TMS to target residual corticospinal connections after stroke

S. J. Hussain;

University of Texas at Austin, University of Texas at Austin, Austin, TX.

MIN38. Decoding Cognitive Signals From the Prefrontal Cortex - Mark Laubach

Theme H – Cognition

Location: WCC Ballroom B

Time: Wednesday, November 15, 2023, 2:00 PM - 4:30 PM

Description: Neural decoding methods have been used in several recent studies to quantify neural correlates of cognitive processing. The methods use machine learning algorithms to relate trial-to-trial variability in neural firing rates to different types of behavioral stimuli, actions, and outcomes. This session will introduce core concepts in neural decoding and provide examples of innovative uses of the methods to understand cognitive processing in the prefrontal cortex of rodents and primates.

Time: Wednesday, November 15, 2023, 2:00 PM - 4:30 PM

MIN38.01. Chair

M. Laubach;

Neuroscience, American University, Washington, DC.

Time: Wednesday, November 15, 2023, 2:00 PM - 4:30 PM

MIN38.02. Co Chair

E. L. Rich;

Neuroscience, Icahn School of Medicine at Mount Sinai, New York, NY.

Time: Wednesday, November 15, 2023, 2:05 PM - 2:28 PM

MIN38.03. Effects of learning on choice-related signals in the rat prelimbic cortex

M. Laubach;

Neuroscience, American University, Washington, DC.

Time: Wednesday, November 15, 2023, 2:28 PM - 2:51 PM

MIN38.04. Extracting flexible representations from prefrontal population activity

T. Spellman;

Neuroscience, University of Connecticut School of Medicine, Farmington, CT.

Time: Wednesday, November 15, 2023, 2:51 PM - 3:14 PM

MIN38.05. Neural representations of learned categories in mouse prefrontal cortex

S. Reinert;

Max Planck Institute for Biological Intelligence, Martinsried, GERMANY.

Time: Wednesday, November 15, 2023, 3:14 PM - 3:37 PM

MIN38.06. Cross-domain information flow in macaque lateral prefrontal cortex

H. Tang;

Laboratory of Neuropsychology, National Institute of Mental Health, Bethesda, MD.

Time: Wednesday, November 15, 2023, 3:37 PM - 4:00 PM

MIN38.07. Cognitive strategies change mnemonic codes in prefrontal cortex

E. L. Rich;

Neuroscience, Icahn School of Medicine at Mount Sinai, New York, NY.

Time: Wednesday, November 15, 2023, 4:00 PM - 4:23 PM

MIN38.08. Geometric transformation of cognitive maps in the prefrontal cortex and hippocampus

S. P. Jadhav;

Neuroscience Program, Dept. of Psychology & Volen Center for Complex Systems, Brandeis University, Waltham, MA.

Symposia

SYM01. Advances in the Neuroscientific Study of Consciousness: Novel Frameworks to Bridge the Gap Between Theories, Experiments, and Clinical Relevance - Umberto Olcese

Theme H – Cognition

Location: WCC 151

Time: Saturday, November 11, 2023, 2:00 PM - 4:30 PM

Description: The study of the neural mechanisms of consciousness has recently been overhauled by the creation of several international adversarial collaborations, that have brought together a new interdisciplinary community focused on solving one of the deepest mysteries in science. This symposium will provide an overview of the theoretical, methodological, experimental and clinically-related advances in the field of consciousness research. We will show how open science is essential to the field's progress.

Time: Saturday, November 11, 2023, 2:00 PM - 4:30 PM

SYM01.01. Chair

U. Olcese;

Swammerdam Institute for Life Sciences, University of Amsterdam, Amsterdam, NETHERLANDS.

Time: Saturday, November 11, 2023, 2:00 PM - 4:30 PM

SYM01.02. Co Chair

L. Melloni;

Max Planck For Empirical Aesthetics, Frankfurt Am Main, GERMANY.

Time: Saturday, November 11, 2023, 2:05 PM - 2:40 PM

SYM01.03. Towards the neural correlates of consciousness

C. Koch;

Allen Inst. For Brain Science, Allen Inst. For Brain Science, Seattle, WA.

Time: Saturday, November 11, 2023, 2:40 PM - 3:15 PM

SYM01.04. Cracking consciousness through adversarial collaborations and open science

L. Melloni;

Max Planck For Empirical Aesthetics, Frankfurt Am Main, GERMANY.

Time: Saturday, November 11, 2023, 3:15 PM - 3:50 PM

SYM01.05. Experimental paradigms to study the neural mechanisms of consciousness across animal models and human subjects

U. Olcese;

Swammerdam Institute for Life Sciences, University of Amsterdam, Amsterdam,
NETHERLANDS.

Time: Saturday, November 11, 2023, 3:50 PM - 4:25 PM

SYM01.06. Practical implications of consciousness science for diagnosis and therapies in neurological patient populations

M. Boly;

Department of Neurology, University of Wisconsin, Madison, WI.

**SYM02. The Nanoscale Organization of Synapses: Tuning Function and Plasticity
- Katharine Smith**

Theme B – Neural Excitability, Synapses, and Glia

Location: WCC Ballroom A

Time: Saturday, November 11, 2023, 2:00 PM - 4:30 PM

Description: In the last decade, new imaging methods and molecular tools have revealed an unexpected, broadly conserved nanoscale organization for synapses, where key molecules are arranged into subsynaptic nanodomains. This new view now guides investigation of synapse and circuit formation, revolutionizing our understanding of synaptic plasticity. This symposium will explore the most recent advances in the field of synaptic nanoscopy, and how this underlies synapse diversity, function, and plasticity.

Time: Saturday, November 11, 2023, 2:00 PM - 4:30 PM

SYM02.01. Chair

K. R. Smith;

Pharmacology, University of Colorado, Aurora, CO.

Time: Saturday, November 11, 2023, 2:00 PM - 4:30 PM

SYM02.02. Co Chair

K. M. Harris;

University of Texas at Austin, University Of Texas At Austin Institute For Neuroscience, Austin,
TX.

Time: Saturday, November 11, 2023, 2:05 PM - 2:40 PM

SYM02.03. Cell type-specific transsynaptic organization of receptor and scaffold proteins

T. A. Blanpied;

U Maryland School of Medicine, University of Maryland School of Medicine, Baltimore, MD.

Time: Saturday, November 11, 2023, 2:40 PM - 3:15 PM

SYM02.04. Nanoscale organization of inhibitory synapses in plasticity and disease

K. R. Smith;

University of Colorado School of Medicine, University of Colorado, Aurora, CO.

Time: Saturday, November 11, 2023, 3:15 PM - 3:50 PM

SYM02.05. Nanoscale glutamate receptor compartmentalization shapes synaptic transmission

H. D. Macgillavry;

Utrecht University, Utrecht University, Utrecht, NETHERLANDS.

Time: Saturday, November 11, 2023, 3:50 PM - 4:25 PM

SYM02.06. Making Trans-synaptic Nanocolumns: Filling and Building Synaptic Nascent Zones

K. M. Harris;

University of Texas at Austin, University Of Texas At Austin Institute For Neuroscience, Austin, TX.

SYM03. Presynaptic Protein Synthesis in Brain Function and Disease - Pablo Castillo

Theme B – Neural Excitability, Synapses, and Glia

Location: WCC 146AB

Time: Sunday, November 12, 2023, 9:30 AM - 12:00 PM

Description: Local synaptic protein synthesis endows remote neuronal compartments with the ability to rapidly respond and adapt to local cues. Although most studies have focused on local protein synthesis in dendrites, growing evidence indicates that axons and presynaptic terminals in the mature brain can also undergo local protein synthesis. This symposium will present recent advances demonstrating important roles for local presynaptic protein synthesis in brain function and disease.

Time: Sunday, November 12, 2023, 9:30 AM - 12:00 PM

SYM03.01. Chair

P. E. Castillo;

Albert Einstein College of Medicine, Albert Einstein College of Medicine, Bronx, NY.

Time: Sunday, November 12, 2023, 9:35 AM - 10:10 AM

SYM03.02. Cell type-specific and local translation in emotional memory

E. Klann;

Center for Neural Science, New York University, New York City, NY.

Time: Sunday, November 12, 2023, 10:10 AM - 10:45 AM

SYM03.03. mRNA transport, translation, and decay in retinal ganglion cell axon terminals

H. Jung;

Anatomy, Yonsei University College of Medicine, Seoul, KOREA, REPUBLIC OF.

Time: Sunday, November 12, 2023, 10:45 AM - 11:20 AM

SYM03.04. Presynaptic protein synthesis and synaptic plasticity

P. E. Castillo;

Dominick P Purpura Department of Neuroscience, Albert Einstein College of Medicine, Bronx, NY.

Time: Sunday, November 12, 2023, 11:20 AM - 11:55 AM

SYM03.05. mRNA transport and translation in sympathetic neuron axons

A. Riccio;

University College London, London, UNITED KINGDOM.

SYM04. Neural and Genetic Mechanisms of Behavioral Evolution - Paul Katz

Theme F – Integrative Physiology and Behavior

Location: WCC Ballroom A

Time: Sunday, November 12, 2023, 9:30 AM - 12:00 PM

Description: Behavior evolves through changes in gene expression and the resulting effects on neural circuits. Therefore, the structure and organization of a neural circuit is shaped as much by its evolutionary history as by its extant function. General concepts of behavioral evolution are emerging from recent phylogenetic comparisons across different evolutionary distances. This symposium focuses on mechanisms underlying the evolution of locomotor and social behaviors in invertebrates and vertebrates.

Time: Sunday, November 12, 2023, 9:30 AM - 12:00 PM

SYM04.01. Chair

P. S. Katz;

Biology, Univ Massachusetts Amherst, Amherst, MA.

Time: Sunday, November 12, 2023, 9:35 AM - 10:10 AM

SYM04.02. Evolution of motor circuits in molluscs

P. S. Katz;

Univ Massachusetts Amherst, Amherst, MA.

Time: Sunday, November 12, 2023, 10:10 AM - 10:45 AM

SYM04.03. Evolution and development of vertebrate locomotor circuits

J. S. Dasen;

NYU School of Medicine, New York, NY.

Time: Sunday, November 12, 2023, 10:45 AM - 11:20 AM

SYM04.04. The evolution of mate recognition in *Drosophila*

V. Ruta;

The Rockefeller University/HHMI, New York, NY.

Time: Sunday, November 12, 2023, 11:20 AM - 11:55 AM

SYM04.05. Evolving new circuits for social communication

L. A. O'Connell;

Stanford University, Stanford, CA.

SYM05. Voltage Imaging: New Horizons in Optical Physiology - János Fuzik

Theme I – Techniques

Location: WCC Ballroom C

Time: Sunday, November 12, 2023, 9:30 AM - 12:00 PM

Description: This session will introduce the newest developments in both *in vivo* and *ex vivo* applications of voltage- and all-optical voltage imaging of neuronal circuits. This session will be delivered by experts in dendritic voltage imaging *in vivo*, *ex vivo* all-optical voltage imaging with Voltage-Seq, voltage sensor development and cortical voltage imaging *in vivo*, and all-optical voltage imaging *in vivo*. The presented cutting-edge works also utilized different voltage sensors.

Time: Sunday, November 12, 2023, 9:30 AM - 12:00 PM

SYM05.01. Chair

J. Fuzik;

Karolinska Institute, Karolinska Institute, Stockholm, SWEDEN.

Time: Sunday, November 12, 2023, 9:35 AM - 10:10 AM

SYM05.02. Chemigenetic voltage sensors for optical monitoring of neural activity

A. S. Abdelfattah;

Abdelfattah Lab, Brown University, Providence, RI.

Time: Sunday, November 12, 2023, 10:10 AM - 10:45 AM

SYM05.03. Voltage-Seq: all-optical postsynaptic connectome-guided single-cell transcriptomics

J. Fuzik;

Karolinska Institute, Karolinska Institute, Stockholm, SWEDEN.

Time: Sunday, November 12, 2023, 10:45 AM - 11:20 AM

SYM05.04. Voltage imaging using kilohertz two-photon fluorescence microscopy

N. Ji;

University of California, Berkeley, Berkeley, CA.

Time: Sunday, November 12, 2023, 11:20 AM - 11:55 AM

SYM05.05. Voltage compartmentalization in spines and dendrites in vivo

R. Yuste;

Columbia University, New York, NY.

SYM06. Common Mechanisms of Learning in Motor and Cognitive Systems - Christos Constantinidis

Theme E – Motor Systems

Location: WCC 151

Time: Sunday, November 12, 2023, 2:00 PM - 4:30 PM

Description: Learning to perform motor or cognitive tasks have been traditionally studied with different methods and paradigms. Some common principles — evident in both behavior and neural activity — underlying different types of learning have begun to emerge. This symposium will bring together investigators using different techniques and studying different systems to understand the mechanisms of learning.

Time: Sunday, November 12, 2023, 2:00 PM - 4:30 PM

SYM06.01. Chair

C. Constantinidis;

Biomedical Engineering, Vanderbilt University, Nashville, TN.

Time: Sunday, November 12, 2023, 2:00 PM - 4:30 PM

SYM06.02. Co Chair

A. P. Batista;

Bioengineering, University of Pittsburgh, Pittsburgh, PA.

Time: Sunday, November 12, 2023, 2:05 PM - 2:40 PM

SYM06.03. The View of Cognition from Motor Cortex

A. P. Batista;

Bioengineering, University of Pittsburgh, Pittsburgh, PA.

Time: Sunday, November 12, 2023, 2:40 PM - 3:15 PM

SYM06.04. Cortical plasticity in cognitive learning

C. Constantinidis;

Biomedical Engineering, Vanderbilt University, Nashville, TN.

Time: Sunday, November 12, 2023, 3:15 PM - 3:50 PM

SYM06.05. Movement vigor as a reflection of decision variables in cognitive tasks

A. A. Ahmed;

Mechanical Engineering, University of Colorado, Boulder, CO.

Time: Sunday, November 12, 2023, 3:50 PM - 4:25 PM

SYM06.06. Cortico-hippocampal interactions during model-based learning

J. D. Wallis;

Psychology/Neuroscience, University of California, Berkeley, CA.

SYM07. Memory and Timing: The Shared Neural Encoding of Retrospective and Prospective Information - Dean Buonomano

Theme H – Cognition

Location: WCC Ballroom A

Time: Monday, November 13, 2023, 9:30 AM - 12:00 PM

Description: The ability to store information about the past in order to prepare for the future is among the most fundamental tasks the brain performs. This task often requires predicting when in time future events will occur — and thus neural mechanisms to tell and encode time. Memory and timing have generally been studied as distinct cognitive functions, but are often intimately linked. This symposium will explore the shared neural and functional mechanisms between memory and temporal processing.

Time: Monday, November 13, 2023, 9:30 AM - 12:00 PM

SYM07.01. Chair

D. V. Buonomano;

Neurobiology, University of California, Los Angeles, Los Angeles, CA.

Time: Monday, November 13, 2023, 9:30 AM - 12:00 PM

SYM07.02. Co Chair

A. Nobre;

University of Oxford, University of Oxford, Oxford, UNITED KINGDOM.

Time: Monday, November 13, 2023, 9:35 AM - 10:10 AM

SYM07.03. The neurophysiology of memory and time.

G. Buzsaki;

New York University, New York University, Langone Medical Center, New York, NY.

Time: Monday, November 13, 2023, 10:45 AM - 11:20 AM

SYM07.04. Timing expectations for proactive memories.

A. Nobre;

University of Oxford, University of Oxford, Oxford, UNITED KINGDOM.

Time: Monday, November 13, 2023, 10:10 AM - 10:45 AM

SYM07.05. Multiplexing working memory and time: encoding retrospective and prospective information in neural trajectories.

D. V. Buonomano;

UCLA, UCLA, Los Angeles, CA.

Time: Monday, November 13, 2023, 11:20 AM - 11:55 AM

SYM07.06. Temporal integration and separation of sequential events in memory

L. Davachi;

Columbia University, Columbia University, New York, NY.

SYM08. Neuronal Bases of Adult-Newborn Relationships - Manuel Mameli

Theme F – Integrative Physiology and Behavior

Location: WCC 151

Time: Monday, November 13, 2023, 9:30 AM - 12:00 PM

Description: This symposium will present insights on brain-driven coordination of social interactions between adults and newborns. Speakers will discuss activity dynamics and anatomical connectivity in the adult brain mediating diverse behaviours toward infants. Furthermore, how sensory cues from infants are processed by maternal brain will be matter of debate. Finally, we will extend these topics in humans discussing how the environment during pregnancy influence fetal/infant brain development.

Time: Monday, November 13, 2023, 9:30 AM - 12:00 PM

SYM08.01. Chair

M. Mameli;

The University of Lausanne, Dept of Fundamental Neuroscience, University of Lausanne, Lausanne, SWITZERLAND.

Time: Monday, November 13, 2023, 9:30 AM - 12:00 PM

SYM08.02. Co Chair

S. Valtcheva;

University of Cologne, University of Cologne, Medical Faculty, Cologne, GERMANY.

Time: Monday, November 13, 2023, 9:35 AM - 10:10 AM

SYM08.03. Antagonistic circuits controlling opposing behaviors towards the young in females

D. Lin;

New York University School of Medicine, New York University School of Medicine, New York, NY.

Time: Monday, November 13, 2023, 10:10 AM - 10:45 AM

SYM08.04. Sensory-hormonal coupling in the postpartum hypothalamus for reliable maternal care

S. Valtcheva;

University of Cologne, University of Cologne, Medical Faculty, Cologne, GERMANY.

Time: Monday, November 13, 2023, 10:45 AM - 11:20 AM

SYM08.05. Neural circuit for negative affect of parenting

M. Mameli;

The University of Lausanne, Dept of Fundamental Neuroscience, University of Lausanne, Lausanne, SWITZERLAND.

Time: Monday, November 13, 2023, 11:20 AM - 11:55 AM

SYM08.06. Prenatal Environment and Parent-Infant Neural Relationships

P. Kim;

Department of Psychology, The University of Denver, College of Arts, Humanities and Social Science., Denver, CO.

SYM09. Translation of Blood Brain Barrier Deficits Into Therapeutics for Neurological Diseases - Stefano Benvegnu

Theme C – Neurodegenerative Disorders and Injury

Location: WCC Ballroom C

Time: Monday, November 13, 2023, 2:00 PM - 4:30 PM

Description: This session will present a contemporary update on the role of the blood brain barrier (BBB) and implications of its dysfunction in neurological diseases. Evolving techniques to study the BBB, and applications of *in vitro* and *in vivo* technologies in drug discovery and development will also be discussed. Finally, the session will explore strategies to neutralize blood toxicity to protect from neurodegeneration and promote neurorepair.

Time: Monday, November 13, 2023, 2:00 PM - 4:30 PM

SYM09.01. Chair

S. Benvegnu;

Dept. of Neuromuscular Diseases, ARUK Drug Discovery Institute, LONDON, UNITED KINGDOM.

Time: Monday, November 13, 2023, 2:00 PM - 4:30 PM

SYM09.02. Co Chair

F. E. Ducotterd;

Dept. of Neuromuscular Diseases, ARUK Drug Discovery Institute, London, UNITED KINGDOM.

Time: Monday, November 13, 2023, 2:05 PM - 2:40 PM

SYM09.03. Neurovascular astrocytic dysregulation in vascular cognitive impairment in dementia

D. M. Wilcock;

University of Kentucky, Indiana University School of Medicine, Indianapolis, IN.

Time: Monday, November 13, 2023, 2:40 PM - 3:15 PM

SYM09.04. Strategies to Neutralize Blood Toxicity to Protect from Neurodegeneration and Promote Neurorepair

K. Akassoglou;

Gladstone Institute, UCSF, San Francisco, CA.

Time: Monday, November 13, 2023, 3:15 PM - 3:50 PM

SYM09.05. A toolbox of human in vitro blood brain barrier models to develop next-generation brain delivery shuttles.

M. Pigoni;

pRED, Roche, Basel, SWITZERLAND.

Time: Monday, November 13, 2023, 3:50 PM - 4:25 PM

SYM09.06. Therapeutic targeting to the blood brain barrier - Wnt pathway restoration at the brain neurovascular unit through inhibition of Notum

S. Benvegnu;

ARUK Drug Discovery Institute, Alzheimer's Research UK - UCL Drug Discovery Institute, London, UNITED KINGDOM.

SYM10. "Place Cells" in Rodents vs Primates: From Vision to Position and Episodic Memory - Mayank Mehta

Theme F – Integrative Physiology and Behavior

Location: WCC 146AB

Time: Monday, November 13, 2023, 2:00 PM - 4:30 PM

Description: The hippocampus supports spatial navigation and episodic memory. However, most rodent studies have focused on spatial navigation whereas primate studies have focused on memory. Controversially, place cells are rare in primates and non-spatial episodic memory cells are rare in rodents. Recent advances, using virtual reality and wireless recordings, have provided surprising insights to resolve this long-standing controversy, which may improve diagnosis and treatment of memory disorders and artificial intelligence.

Time: Monday, November 13, 2023, 2:00 PM - 4:30 PM

SYM10.01. Chair

M. R. Mehta;

University of California at Los Angeles (UCLA), University of California at Los Angeles (UCLA), Los Angeles, CA.

Time: Monday, November 13, 2023, 2:00 PM - 4:30 PM

SYM10.02. Co Chair

S. C. Wirth;

Institut des Sciences Cognitives, Centre National de la Recherche Scientifique, Bron Lyon, FRANCE.

Time: Monday, November 13, 2023, 2:05 PM - 2:40 PM

SYM10.03. The marmoset hippocampus is a GPS, but G is for gaze

J. C. Martinez-Trujillo;

Western University, Schulich School of Medicine and Dentistry, Western Institute for Neuroscience, Western University, London, ON, CANADA.

Time: Monday, November 13, 2023, 2:40 PM - 3:15 PM

SYM10.04. Rodents thinking about goals in all the right places

A. K. Lee;

Neurology, Howard Hughes Medical Institute, Beth Israel Deaconess Medical Center, Boston, MA.

Time: Monday, November 13, 2023, 3:15 PM - 3:50 PM

SYM10.05. Hippocampus 2.0: Three simple rules

M. R. Mehta;

University of California at Los Angeles (UCLA), University of California at Los Angeles (UCLA), Los Angeles, CA.

Time: Monday, November 13, 2023, 3:50 PM - 4:25 PM

SYM10.06. A place with a view in the macaque hippocampus.

S. C. Wirth;

Institut des Sciences Cognitives, Centre National de la Recherche Scientifique, Bron Cedex, FRANCE.

SYM11. Hippocampal Neurogenesis in the Human Adult, Aging, and Demented Brain: Novel Latest Evidence - Fred Gage

Theme C – Neurodegenerative Disorders and Injury

Location: WCC Ballroom C

Time: Tuesday, November 14, 2023, 9:30 AM - 12:00 PM

Description: This symposium will present the latest evidence concerning the existence of hippocampal neurogenesis in the human brain in health and disease. Speakers will present the results of single-nucleus RNA-sequencing aided by a machine learning approach and show neurogenesis during infant, adolescent, adult, and aging. Multi-omics approach will provide novel information on neurogenesis in dementia. This new evidence has major clinical and therapeutic implications for brain function and dysfunction.

Time: Tuesday, November 14, 2023, 9:30 AM - 12:00 PM

SYM11.01. Chair

F. H. Gage;

Salk Institute, Salk Institute, La Jolla, CA.

Time: Tuesday, November 14, 2023, 9:30 AM - 12:00 PM

SYM11.02. Co Chair

O. Lazarov;

The University of Illinois at Chicago, The University of Illinois at Chicago, Chicago, IL.

Time: Tuesday, November 14, 2023, 9:35 AM - 10:10 AM

SYM11.03. The human anterior dentate gyrus transcriptome at single-cell and spatial resolution

M. Boldrini;

Columbia University - New York State Psychiatric Institute, New York, NY.

Time: Tuesday, November 14, 2023, 10:10 AM - 10:45 AM

SYM11.04. Molecular landscapes of human hippocampal immature neurons across lifespan and in Alzheimer's disease

H. Song;

University of Pennsylvania, University of Pennsylvania, Philadelphia, PA.

Time: Tuesday, November 14, 2023, 10:45 AM - 11:20 AM

SYM11.05. A multi-omics approach to human hippocampal neurogenesis in the aging and Alzheimer's brain

O. Lazarov;

The University of Illinois at Chicago, The University of Illinois at Chicago, Chicago, IL.

Time: Tuesday, November 14, 2023, 11:20 AM - 11:55 AM

SYM11.06. Adult hippocampal neurogenesis signatures during physiological and pathological aging

M. Llorens-Martin;

Universidad Autonoma De Madrid, Spanish Scientific Research Council, Madrid, SPAIN.

SYM12. The Emerging Noncoding RNA-Centric Biology of Neuronal Plasticity and Its Disorders - Sathyanarayanan Puthanveetil

Theme H – Cognition

Location: WCC 146AB

Time: Tuesday, November 14, 2023, 9:30 AM - 12:00 PM

Description: Innovations in the RNA sequencing have led to the discovery of several new classes of noncoding RNAs. Among them, long-noncoding RNAs (lncRNAs) and Circular RNAs (CircRNAs) are particularly fascinating because of their potential for modulating the functions of genes, other RNAs and proteins. Their functions and mechanisms in neurons remain elusive. This session will highlight recent breakthroughs in our understanding of lncRNAs and circRNAs in mediating neuronal plasticity and its disorders.

Time: Tuesday, November 14, 2023, 9:30 AM - 12:00 PM

SYM12.01. Chair

S. V. Puthanveetil;

Neuroscience, UF Scripps Biomedical Research, Jupiter, FL.

Time: Tuesday, November 14, 2023, 9:30 AM - 12:00 PM

SYM12.02. Co Chair

F. D. Lubin;

Univ Alabama Birmingham, University of Alabama, Birmingham, Birmingham, AL.

Time: Tuesday, November 14, 2023, 9:35 AM - 10:10 AM

SYM12.03. A circularRNA in nucleus accumbens that regulates adaptations to stress

P. J. Kenny;

Neuroscience, Icahn School of Medicine At Mount Sinai, New York, NY.

Time: Tuesday, November 14, 2023, 10:10 AM - 10:45 AM

SYM12.04. The role of the lncRNA Neat1 in memory formation and associated memory deficits with aging

F. D. Lubin;

Neurobiology, University of Alabama at Birmingham, Birmingham, AL.

Time: Tuesday, November 14, 2023, 10:45 AM - 11:20 AM

SYM12.05. The Silc1 long noncoding RNA is required for efficient spatial memory formation

I. Ulitsky;

Molecular Neuroscience, Weizmann Institute of Science, Rehovot, ISRAEL.

Time: Tuesday, November 14, 2023, 11:20 AM - 11:55 AM

SYM12.06. lncRNA networks at the synapse in mediating structural Plasticity and memory

S. V. Puthanveettil;

Neuroscience, UF Scripps Biomedical Research, Jupiter, FL.

**SYM13. Cell-Type Specific Epigenetic Regulation of Complex Neurobiological Disease
- Elizabeth Heller**

Theme G – Motivation and Emotion

Location: WCC 145

Time: Tuesday, November 14, 2023, 2:00 PM - 4:30 PM

Description: Neurological and psychiatric diseases impact physiology, signaling, morphology, and gene expression across greatly diverse cell types in the brain. This session will present findings on cell-type specific epigenetic regulation in preclinical models of human disease, including stress, addiction, chronic pain, and cognition. Studies include epigenetic profiling and validation by cell-type-targeted manipulation and phenotyping in preclinical models that include age and sex as variables.

Time: Tuesday, November 14, 2023, 2:00 PM - 4:30 PM

SYM13.01. Chair

E. A. Heller;

University of Pennsylvania, University of Pennsylvania, PHILADELPHIA, PA.

Time: Tuesday, November 14, 2023, 2:00 PM - 4:30 PM

SYM13.02. Co Chair

H. W. Gabel;

Washington University School of Medicine, Washington University Medical School, St. Louis, MO.

Time: Tuesday, November 14, 2023, 2:05 PM - 2:40 PM

SYM13.03. Insights into cell-type specific susceptibility of neuronal populations in Rett syndrome

H. Gabel;

7232 GREENWAY AVE, Washington University is St Louis, St. Louis, MO.

Time: Tuesday, November 14, 2023, 2:40 PM - 3:15 PM

SYM13.04. Cell-type specific epigenetic regulation of Nr4a1 attenuates cocaine reward behavior.

E. A. Heller;

University of Pennsylvania, University of Pennsylvania, PHILADELPHIA, PA.

Time: Tuesday, November 14, 2023, 3:15 PM - 3:50 PM

SYM13.05. Adolescent exercise modulates the neural epigenome and improves cognition following early-life adversity.

A. S. Ivy;

University of California – Irvine School of Medicine, Irvine, CA.

Time: Tuesday, November 14, 2023, 3:50 PM - 4:25 PM

SYM13.06. Next generation gene therapy for chronic pain

W. Renthal;

Brigham and Women's Hospital/Harvard Medical School, Boston, MA.

SYM14. Mechanisms and Modulations of the Brain Lymphatics System - Helene Benveniste

Theme C – Neurodegenerative Disorders and Injury

Location: WCC Ballroom C

Time: Wednesday, November 15, 2023, 9:30 AM - 12:00 PM

Description: The importance of the glymphatic-lymphatic system for brain health is supported by studies showing that the two systems clear waste in an age-dependent manner. The brain waste disposal process is not well understood. This session will review mechanistic regulators of glymphatic-lymphatic function. Speakers will showcase recent insights into modulators and

technical advances that highlight the therapeutic potential of augmenting glymphatic-lymphatic system function for sustaining brain health.

Time: Wednesday, November 15, 2023, 9:30 AM - 12:00 PM

SYM14.01. Chair

H. Benveniste;

Yale School of Medicine, Yale School of Medicine, New Haven, CT.

Time: Wednesday, November 15, 2023, 9:30 AM - 12:00 PM

SYM14.02. Co Chair

I. Belfer;

Division of Extramural Research National Center for Complementary and Integrative Health (NCCIH), NIH, Bethesda, MD.

Time: Wednesday, November 15, 2023, 9:35 AM - 10:10 AM

SYM14.03. Brain states control glymphatic fluid transport

M. Nedergaard;

University of Copenhagen, University of Copenhagen, Copenhagen, DENMARK.

Time: Wednesday, November 15, 2023, 10:10 AM - 10:45 AM

SYM14.04. Uncovering the functional links between meningeal lymphatic drainage and brain myelination.

S. Da Mesquita;

Mayo Clinic, Mayo Clinic, Jacksonville, FL.

Time: Wednesday, November 15, 2023, 10:45 AM - 11:20 AM

SYM14.05. Regulation of glymphatic clearance of beta-amyloid by frequency-dependent vasoactive peptide release

L. Tsai;

Department of Brain and Cognitive Sciences, Massachusetts Institute of Technology, Cambridge, MA.

Time: Wednesday, November 15, 2023, 11:20 AM - 11:55 AM

SYM14.06. Driving forces of cerebrospinal fluid flow in the human brain

L. D. Lewis;

MIT and Massachusetts General Hospital, Cambridge, MA.