



WINTER CONFERENCE ON BRAIN RESEARCH

2026 Winter Brain Program Agenda

**All scheduled programming is subject to change.*

Saturday, January 24, 2026	
6:00 PM – 6:30 PM	Welcome Reception for Newcomers, Travel Fellows, and Mentors
6:30 PM – 7:30 PM	Welcome Reception (All are welcome!)
Sunday, January 25, 2026	
7:00 AM – 8:00 AM	Plenary Breakfast
8:00 AM – 9:30 AM	Conference Welcome and Plenary Address: Travis Reider, Ph.D. - <i>Responsible Opioid Use During a Drug Overdose Crisis</i>
9:45 AM – 11:15 AM	Pioneer Session #1: Kristen Harris, Ph.D. - <i>Synapse Development and Plasticity During Long-Term Potentiation</i>
11:15 AM – 11:45 AM	Panel Chair Training Session
2:00 PM – 3:30 PM	Professional Development Session #1: <i>Preparing for the Job You Want: The Business of Academia</i>
3:30 PM – 4:30 PM	View Exhibits and Poster Session #1
4:30 PM – 6:30 PM	Panel Sessions • <i>Advances in Auditory Cortical Circuit Development and Function</i> • <i>Mechanisms of Learning and Behavior Beyond Integrated Value</i> • <i>Reconsidering The Textbook: New Players in Our Concepts of Central Homeostatic Regulation</i> • <i>Safety Nets on the Slopes and in the CNS: Perineuronal Nets in Neuroplasticity, Addiction and Disease</i> • <i>Getting the “Beta” on Delta Glutamate Receptors</i> • <i>Driving With the Top-Down: Investigating the Role of Frontal Cortices in Modulating Alcohol and Stress Comorbidity</i> • <i>Utilizing Novel Models to Elucidate Pathogenic Mechanisms of Alzheimer’s Disease</i>
6:30 PM – 7:00 PM	Evening Refreshment Break
7:00 PM – 8:30 PM	Panel Sessions • <i>Mechanistic Insights into the Prevention and Treatment of Childhood and Adolescent Psychiatric Disorders</i> • <i>Molecular Signals at the Neurovascular Unit: Convergent Mechanisms in Neuropathic Pain and Traumatic Brain Injury</i> • <i>Dopamine Neurotransmission: New Frontiers in Brain-Body Homeostasis</i> • <i>Epilepsy Across Scales: Mechanisms, Models, and Translational Frontiers</i> • WORKSHOP: <i>The Modern Clinician-Scientist’s Role to Bridge Basic Neuroscience and Clinical Practice</i>
Monday, January 26, 2026	
6:30 AM – 8:30 AM	Breakfast at Leisure

6:30 AM – 8:30 AM	Board of Directors Meeting #1 (Invitation Only)
7:30 AM – 9:30 AM	Panel Sessions • <i>Carving Soundscapes: Slalom Across Auditory Coding Circuits</i> • <i>Slalom Between Craving and Control: Prefrontal Cortex Regulation of Drug Seeking and Emotion</i> • <i>The Emerging Role of Astrocytic Deficits in Neurodevelopmental Disorders</i> • <i>The social and affective brain: From neurons to neuroimaging</i> • <i>Advances in Linking Biochemistry and Behavior Using Fluorescence Lifetime Biosensors</i> • <i>Excitatory/Inhibitory (E/I) Biomarkers for Ketamine Response: Focusing on Glutamate and GABA Modulation</i> • <i>Bandits at Big Sky—Neurocomputational Underpinnings of Reinforcement Learning Through the Lens of the Field’s Most Popular Task</i>
9:45 AM – 10:45 AM	Diversity & Inclusion Power Hour
11:00 AM – 12:00 PM	Inclusive Networking Coffee Hour
3:00 PM – 3:30 PM	Data Blitz
3:30 PM – 4:30 PM	View Exhibits and Poster Session #2
4:30 PM – 6:30 PM	Panel Sessions • <i>Promises and Challenges of Multi-Omics in Biomarker Development for Neurodegenerative Diseases</i> • <i>NMDA Receptor Subunit Properties and Their Role in the Control of Circuit Function</i> • <i>Avalanches of Emotion: Making Sense of Insular Cortex Circuits for Negative Affect</i> • <i>The Role of Dendritic Spine Dynamics in Distinct Learning Paradigms and Its Contributions to Cognitive Alterations in Neurodegenerative, Neuropsychiatric and Neuropsychotropic Conditions</i> • <i>Integration of Diverse Neuromodulatory Signals in the Striatum: From Synaptic Inputs to Behavioral Outputs</i> • <i>Beyond Disinhibition: Revisiting Mu Opioid Modulation Within the VTA Circuitry</i> • <i>Too Much Ice on the Slopes: Uncovering Central and Peripheral Consequences of Methamphetamine Use in Preclinical Models</i>
7:00 PM – 8:30 PM	Brain Talk Town Meeting: Travis Rieder, Ph.D. - <i>Catastrophe Ethics: How to be Good in a World on Fire</i>
Tuesday, January 27, 2026	
6:30 AM – 8:30 AM	Breakfast at Leisure
6:30 AM – 8:00 AM	Travel Fellow & Mentor Breakfast
7:30 AM – 9:30 AM	Panel Sessions • <i>Advances in Bioanalytical Sensing Technologies for in Vivo Neurochemical Monitoring in Rodents and Primates</i> • <i>Disease-Specific Roles of Glial Cells - From Concepts to Promising Treatment Interventions</i> • <i>Neural and Inflammatory Mechanisms Contributing to Traumatic Brain Injury Pathology-Novel Potential Sites for Translation and Therapeutic Intervention</i> • <i>Structural and Functional Analysis of the Glutamatergic Synapse at the Nanoscale Level</i> • <i>Impact of Emotional Circuits on Quantitative Behavior and Executive Function</i>

	• <i>Translational Brain Stimulation I: Modulating Neural Circuit Physiology to Influence Behavior</i> • <i>Opioid Self Administration: Behavioral, Molecular, and Circuit Mechanisms of Addiction Vulnerability</i>
9:45 AM – 11:15 AM	Pioneer Session #2: Amy Newman, Ph.D. - A Medicinal Chemist's Journey One Mogul at a Time
3:30 PM – 4:30 PM	View Exhibits and Poster Session #3
4:30 PM – 6:00 PM	Professional Development Session #2: <i>Staying on the Trail: Science Communications and Media Training</i>
6:00 PM – 6:30 PM	Evening Refreshment Break
6:30 PM – 8:30 PM	Panel Sessions • <i>Risk Factors for Pain Development and Chronification</i> • <i>Balancing the Brain: Inhibitory Synapses in Health and Disease</i> • <i>Advancing Precision Medicine for TBI: Biomarkers Across Genes, Proteins, and Circuits</i> • <i>Translational Brain Stimulation II: Modulating Neural Circuit Physiology to Influence Behavior</i> • <i>Gut-brain Axis in Health and Disease</i> • <i>Neural Mechanisms Linking Sensation, Behavior, And Memory</i>
Wednesday, January 28, 2026	
6:30 AM – 8:30 AM	Breakfast at Leisure
7:30 AM – 9:30 AM	Panel Sessions • <i>Synaptic Modulators, Circuit Interactions, and Behavioral Outcomes in Health and Disease</i> • <i>Experience-Driven Epigenetic Regulation of Memory</i> • <i>Cannabis Use and Health: Green Slope, Blue Slope or Double Black?</i> • <i>Characterization of Dopaminergic Contributions to Amygdala-Mediated Emotional Learning</i> • <i>Endogenous Opioid Modulation of Neural Circuits for Motivated Behavior</i> • <i>Information Seeking: Neurons and Networks, Curiosity and Boredom</i>
10:00 AM – 11:30 AM	Smitty Stevens Ski Slalom (Extra Fee)
11:30 AM – 1:30 PM	Mountain Lunch
3:30 PM – 4:30 PM	View Exhibits and Poster Session #4
4:30 PM – 6:30 PM	Panel Sessions • <i>Advancing Mechanisms of Neuronal Homeostasis and Sleep</i> • <i>Decoding Cortical Feedback: Mechanisms and Functions</i> • <i>Body-Brain interactions Controlling Alcohol Intake</i> • <i>Linking Mitochondrial Metabolism to Altered Excitability in Bipolar Disorder Using Brain Organoids</i> • <i>The Lateral Habenula at The Interface Between Motivation and Pain</i> • <i>Structure, Function, and the Application of Network Neuroscience, To Understand the Healthy and Diseased Brain</i> • <i>Cognitive Circuitry and Behavior as a Cause and Effect of Substance Use</i>
6:30 PM – 7:30 PM	Winter Brain Business Meeting
7:30 PM – 9:30 PM	Special Poster Session and Reception
Thursday, January 29, 2026	

6:30 AM – 8:30 AM	Breakfast at Leisure
6:30 AM – 8:30 AM	Board of Directors Meeting #2 (Invitation Only)
7:30 AM – 9:30 AM	Panel Sessions • <i>Fresh Powder: The Latest in Our Understanding of Sensory Signaling</i> • <i>Routes off the Lone Peak: New Pathways Toward Injury Recovery and Pain Relief</i> • <i>Dynamic Gain Modulation by Endogenous Cannabinoids</i> • <i>Network Dynamics in Neuropsychiatric Disorders: From Symptoms to Circuits</i> • <i>Amygdala Modulation Across Scales and Species</i> • <i>Navigating Theta Moguls on Oscillatory Slopes</i> • <i>Organization and Neuromodulation of Temporal-Prefrontal Circuits of Decision-Making and Learning</i>
3:00 PM – 4:30 PM	Advocacy Panel: <i>Scientific Advocacy: Advocating for Science, Policy, and Yourself</i>
4:30 PM – 6:30 PM	Panel Sessions • <i>Carving New Trails to Dopamine Function in Learning and Decision Making</i> • <i>Alzheimer's Disease Mechanism and Therapeutic Intervention</i> • <i>Under The Big Sky: Illuminating Synaptic Plasticity With High-Resolution Imaging</i> • <i>Prefrontal Mechanisms of Adaptive Cognitive Behaviors</i> • <i>Neurobiology of Motivation: Insights From Food, Drugs, And Emerging Approaches to Addiction Research</i> • <i>From Development to Aging: Social Circuits in Psychiatric Disorders and Neurodegeneration</i> • <i>Integrating AI And Machine Learning with Brain and Clinical Mechanisms</i>
6:30 PM – 7:30 PM	Cocktail Hour
7:30 PM – 11:00 PM	Awards Banquet and Dance