

8:30 a.m. – 9:45 a.m.
Mini Panel
Diplomat Ballroom 1 & 2

Behavioral Paradigms to Improve Signal Detection in Trials of Cognition Enhancing Drugs

Chair: Richard Keefe
Co-Chair: Stephen R. Marder

- 8:30 a.m. The Phosphodiesterase 4 Inhibitor, HT-0712, Facilitates
Cognitive Rehabilitation Following Traumatic Brain Injury
Tim Tully
- 8:55 a.m. Cognitive Remediation with D-cycloserine Added to Cue
Exposure Therapy
A. Eden Evins
- 9:20 a.m. The Effects of Modafinil and Cognitive Training on Cognitive
Performance
Avi Reichenberg

MP

9:45 a.m. – 11:00 a.m.

Mini Panel

Diplomat Ballroom 1 & 2

Pathology Driven Biomarker Development for Major Depressive Disorder: Bridging Central to Peripheral Markers

Chair: Jeffrey Meyer

9:45 a.m. Targeting Monoamine Oxidase A as a Biomarker for Major Depressive Disorder

Jeffrey Meyer

10:10 a.m. Imaging the 18 kDa Translocator Protein (TSPO) in Vivo

Eugenii A. Rabiner

10:35 a.m. Protein Kinase A: Biomarker for Major Depression

Yogesh Dwivedi

MP

8:30 a.m. – 11:00 a.m.

Panel

Regency Ballroom 2

**Molecular and Cellular Mechanisms Underlying Resilience in
Mood and Other Social-psychological Stress-related Disorders:
New Avenue for Novel Therapeutics?**

Chair: Hussein K. Manji

- 8:30 a.m. The Lasting Legacy of Early Social Stress on the Epigenome
Dietmar Spengler
- 9:00 a.m. Blockade of the Inflammasome in Brain Produces Antidepressant
Effects and Resilience to Stress
Ronald S. Duman
- 9:30 a.m. Plausible Roles of Bcl-2 Family Proteins in Cellular and
Behavioral Resilience to Mood Disorders
Guang Chen
- 10:00 a.m. Mechanisms Underlying the Resilience to Severe Social Stress
and the Role of Ventral Tegmental Area (VTA)
Ming-Hu Han
- 10:30 a.m. Discussant: *Steven E. Hyman*

PA

8:30 a.m. – 11:00 a.m.

Panel

Regency Ballroom 1

Reward/Motivation Deficits in Attention Deficit Hyperactivity Disorder (ADHD) and the Effects of Medication

Chair: Wilson M. Compton

Co-Chair: James Swanson

8:30 a.m. Functional Connectivity of Reward Circuits in the Rat and Human Brain

Elliot A. Stein

8:30 a.m. Reward Circuitry, Risky Behaviors, and ADHD

Francisco Xavier Castellanos

9:30 a.m. Dopamine Reward Circuitry in Attention Deficit Disorder

Nora D. Volkow

10:00 a.m. Altered Sensitivity to Reinforcement in Individuals with ADHD: Implications for the Development of Aberrant Health Behaviors

Scott H. Kollins

10:30 a.m. Discussant: *James Swanson*

PA

8:30 a.m. – 11:00 a.m.

Panel

Regency Ballroom 3

Opioid and Cannabinoid Mechanisms in Alcohol Addiction: Recent Evidence from Functional Brain Imaging

Chair: Kent Hutchison

- 8:30 a.m. The Effects of Alcohol Consumption on Endogenous Opioid
Release in the Human Orbitofrontal Cortex and Nucleus
Accumbens
Jennifer Mitchell
- 9:00 a.m. Influence of Mu-Opioid Receptor (OPRM1) A118G
Polymorphism on Pharmacological Effects of Alcohol: A
Translational Approach
Vijay A. Ramchandani
- 9:30 a.m. CNR1 Variation is Associated with BOLD Response to Alcohol
Cues and Alcohol Dependence Symptom Count
Kent Hutchison
- 10:00 a.m. Reduced Cannabinoid CB1 Receptor Binding in Alcohol
Dependence Measured with Positron Emission Tomography
Markus Heilig
- 10:30 a.m. Discussant: *Raye Litten*

PA

8:30 a.m. – 11:00 a.m.

Panel

Atlantic Ballroom 2

Beta-amyloid Neuropathology in Cognitively Normal Individuals: Preclinical Alzheimer's Disease or Cognitive Resilience?

Chair: Susan M. Resnick

Co-Chair: Dean F. Wong

- 8:30 a.m. The Detectability of Ab Amyloid by PET Imaging in Mouse Models of Alzheimer's Disease with Different Rate of Plaque Accumulation
Alena Savonenko
- 9:00 a.m. Preclinical AD: Evidence for Amyloid-associated Alterations in Brain Function and Structure
Reisa Sperling
- 9:30 a.m. Neuroimaging Predictors of Cognitive Impairment and Resilience: Insights from the Baltimore Longitudinal Study of Aging
Susan M. Resnick
- 10:00 a.m. Resilient Brain Aging: Neuropathological, Cellular and Biochemical Features of Pathological Alzheimer's Disease with Normal Cognition
Steven E. Arnold
- 10:30 a.m. Discussant: *Steven T. DeKosky*

PA

8:30 a.m. – 11:00 a.m.

Panel

Atlantic Ballroom 3

**Inhibition of Phosphodiesterases to Treat Psychiatric Disorders:
Advances through Innovation in Preclinical Models and
Feedback from the Clinic**

Chair: Nicholas Brandon

- 8:30 a.m. The Phosphodiesterase Isoform 4A5 (PDE4A5) is the Critical
Mediator of Hippocampus-dependent Cognitive Impairments
Induced by Sleep Loss
Ted Abel
- 9:00 a.m. Alcohol Drinking and Seeking Behaviors: Role of
Phosphodiesterase-4 (PDE4)
Han-Ting Zhang
- 9:30 a.m. Phosphodiesterases Differentially Determine the Spatial and
Temporal Modalities of cAMP Signal Integration in the Cortex
and Striatum.
Pierre Vincent
- 10:00 a.m. Inhibition of Phosphodiesterase10A for the Treatment of
Schizophrenia: Preclinical Rationale and Clinical Evaluation
Christopher J. Schmidt
- 10:30 a.m. Discussant: *Akira Sawa*

PA

8:30 a.m. – 11:00 a.m.

Panel

Atlantic Ballroom 1

Dendritic Spine Plasticity in Depression and Addiction

Chair: Eric J. Nestler

Co-Chair: Scott Russo

- 8:30 a.m. Molecular Basis of Structural Plasticity of Nucleus Accumbens
Neurons Induced by Drugs of Abuse
Eric J. Nestler
- 9:00 a.m. Epigenetic Regulation of Synaptic Remodeling in Depression
Scott Russo
- 9:30 a.m. Subcellular Synaptic Connectivity in the Nucleus Accumbens
Adam Carter
- 10:00 a.m. Opposing Effects of Fear Conditioning and Extinction on
Dendritic Spine Remodeling in the Mouse Cortex
Wenbiao Gan
- 10:30 a.m. Discussant: *John Morrison*

PA

3:00 p.m. – 5:30 p.m.

Panel

Regency Ballroom 1

Circadian Rhythms and Mood Disorders: Clock Genes and New Treatment Implications

Chair: William Bunney

Co-Chair: Ellen Frank

- 3:00 p.m. Circadian Clock Genes in Control and Major Depressive Disorder Brain Tissue: Potential Role in Mode of Action of Ketamine
William Bunney
- 3:30 p.m. Patients' Self-reported Chronotype and Social Rhythm Changes after Treatment of Major Depression
Ellen Frank
- 4:00 p.m. Use of the Clock Mutant Mice to Identify New Mood Stabilizing Agents
Colleen A. McClung
- 4:30 p.m. The Circadian Transcriptional Network in Mammals
Joseph S. Takahashi
- 5:00 p.m. Discussant: *David J. Kupfer*

PA

3:00 p.m. – 5:30 p.m.

Panel

Atlantic Ballroom 1

Neuronal Circuit Regulation of Ventral Tegmental Area Neurons

Chair: Garret Stuber

- 3:00 p.m. Subcellular Segregation of Dopamine and Glutamate Signaling
by a Subset of Ventral Tegmental Area Neurons
Marisela Morales
- 3:30 p.m. Anatomically-specific Ventral Tegmental Area Afferents Control
Reward and Aversion
Garret Stuber
- 4:00 p.m. Plasticity and Function of Distinct Subtypes of Dopamine
Neurons
Robert Malenka
- 4:30 p.m. Dopamine Neurons Modulate the Neural Encoding and
Expression of Depression-related Behavior
Kay M. Tye
- 5:00 p.m. Discussant: *Antonello Bonci*

PA

3:00 p.m. – 5:30 p.m.
Panel
Regency Ballroom 3

Applying Translational Research and Imaging to Treatment Strategies in Alcoholism

Chair: Rajita Sinha

- 3:00 p.m. Translational Neuroimaging Studies of Alcoholism: From Rats to Man
Adolf Pfefferbaum
- 3:30 p.m. Brain Mechanisms of Behavioral Changes Promoting Relapse in Alcohol Dependent Individuals: A Translational Approach
Theodora Duka
- 4:00 p.m. Altered Prefrontal Structure and Function Predicts Heavy Drinking and Alcohol Relapse: Are there Clues for Novel Treatment Strategies?
Rajita Sinha
- 4:30 p.m. Striatal-limbic Suppression during Anticipatory Anxiety in Alcohol-dependent Men
Bryon Adinoff
- 5:00 p.m. Discussant: *Charles P. O'Brien*

PA

3:00 p.m. – 5:30 p.m.

Panel

Atlantic Ballroom 2

**Lesson from Animal Studies of Genetic Risk Factors for
Psychiatric Disorders of Neurodevelopmental Origin:
How can we Move Forward with our Research for Novel
Treatment Interventions?**

Chair: Atsushi Kamiya

3:00 p.m. Insulin-like Growth Factor 1 Therapy in Rett Syndrome: From
Animal Studies to Clinic

Daniela Tropea

3:30 p.m. Modeling Lissencephaly-From Pathogenesis to Therapies

Anthony Wynshaw-Boris

4:00 p.m. Regulatory Role of DISC1 for Excitatory Action of GABA
Signaling in Prefrontal Cortex Development and Function

Atsushi Kamiya

4:30 p.m. Pathological Mechanisms of Aberrant Neuregulin Signaling
Revealed by Temporal Control of Expression

Lin Mei

5:00 p.m. Discussant: *Patricio O'Donnell*

PA

3:00 p.m. – 5:30 p.m.

Panel

Atlantic Ballroom 3

Glucocorticoid Receptors as Pharmacologic Targets in Psychiatry

Chair: Alan F. Schatzberg

- 3:00 p.m. Corticosteroid-dependent Plasticity Mediates Compulsive Alcohol Drinking in Rats
George F. Koob
- 3:30 p.m. Working Memory is Modulated by Glucocorticoid Receptor and Dopaminergic Genes
Wissam El-Hage
- 4:00 p.m. A Human Laboratory Study of Mifepristone Treatment for Alcohol Dependence
Barbara J. Mason
- 4:30 p.m. The Role of Glucocorticoid Receptors in Bipolar Disorder
Allan H. Young
- 5:00 p.m. Discussant: *Mary L. Phillips*

PA

3:00 p.m. – 5:30 p.m.

Panel

Regency Ballroom 2

Anxiety Disorders: New Evidence for Structural and Functional Connectivity Abnormalities

Chair: Ned H. Kalin

Co-Chair: Jennifer Blackford

- 3:00 p.m. Structural and Functional Alterations Predict Individual Differences in Behavioral Inhibition
Andrew S. Fox
- 3:30 p.m. Intrinsic Connectivity Abnormalities in Social Anxiety
Jennifer Blackford
- 4:00 p.m. Frontolimbic Connectivity in Generalized Anxiety Disorder
Jack B. Nitschke
- 4:30 p.m. Targeting the Medial Prefrontal Cortex in the Treatment of Pediatric Anxiety
Danny Pine
- 5:00 p.m. Discussant: *Scott Rauch*

PA

3:00 p.m. – 5:30 p.m.
Panel
Diplomat Ballroom 1 & 2

Army STARRS Suicide Research: From Bench to Battlefield

Chair: Murray B. Stein
Co-Chair: Robert Ursano

- 3:00 p.m. The Army STARRS Study Plan
 Robert Ursano
- 3:30 p.m. Executive Functioning and Suicidal Behavior among Soldiers:
 Results from the Army STARRS Study
 Matthew Nock
- 4:00 p.m. A Beating of Minds: Suicide and Traumatic Brain Injury
 Murray B. Stein
- 4:30 p.m. TBI and Medical Illness as Predictors of Suicide Risk in US
 Army Soldiers
 Michael Schoenbaum
- 5:00 p.m. Discussant: *Thomas Insel*

PA