

2019 Agenda Overview

Thursday, October 17, 2019		
6:30am - 8:00am	Breakfast	Garden Foyer
8:00am - 10:00am	Concurrent Sessions*	Garden Room & Waterfront AB
10:00am - 10:15am	Break	Garden Foyer
10:15am - 12:15pm	Concurrent Sessions*	Garden Room & Waterfront AB
12:15pm - 2:00pm	Mid-day Break	{Lunch on Own}
2:00pm - 3:00pm	Plenary	Garden Room
3:00pm - 3:15pm	Break	Garden Foyer
3:15pm - 5:15pm	Concurrent Sessions*	Garden Room & Waterfront AB
Friday, October 18, 2019		
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2:00pm - 4:00pm	Concurrent Sessions*	Garden Room & Waterfront AB
4:00pm - 4:15pm	Break	Garden Foyer
4:15pm - 5:30pm	Poster Talks	Garden Room
5:30pm - 7:30pm	Poster Session and Reception 	Lower Atrium
Saturday, October 19, 2019		
6:30am - 8:00am	Breakfast	Garden Foyer
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DETAILED AGENDA

Thursday, October 17, 2019

6:30 am—8:00 am	Breakfast	Garden Foyer
7:00 am – 5:15 pm	Registration	Garden Foyer
8:00 am – 10:00 am	Symposia Sessions	
<i>Cellular and Molecular Mechanisms of Neurodevelopmental and Psychiatric Disorders</i> Chair: Karun K. Singh, Stem Cell and Cancer Research Institute, McMaster University Co-Chair: Kristen Brennand, Icahn School of Medicine at Mount Sinai		Garden Room
Presenters: <ul style="list-style-type: none"> • <i>Prioritization of Potential Therapeutic Targets by Analysis of Postmortem Human Schizophrenic Brain and Induced Pluripotent Stem Cell Models</i>, Jennifer A. Erwin, Lieber Institute for Brain Development • <i>A Platform to Identify Autism-Associated Protein Interaction Networks</i>, Karun Singh, Stem Cell and Cancer Research Institute, McMaster University • <i>Using Stem Cells to Explore the Genetics Underlying Neuropsychiatric Disease</i>, Kristen Brennand, Icahn School of Medicine at Mount Sinai • <i>Hypoxia-Induced Corticogenesis Defects in a Human Cellular Model of Brain Injury of Prematurity</i>, Anca Pasca, Stanford University 		
<i>Neuronal Ectodomain Shedding and Ectodomain-Mediated Signaling: Implications for Pathogenesis, Biomarkers, and Therapies</i> Chair: Peter Penzes, Northwestern University		Waterfront AB
Presenters: <ul style="list-style-type: none"> • <i>Novel Functions of Synaptic Ectodomains Detectable in the CSF</i>, Peter Penzes, Northwestern University • <i>Ectodomain Shedding as a Molecular Switch to Establish Functional Synaptic Networks</i>, Hisashi Umemori, Massachusetts General Hospital/Harvard • <i>Myelin Plasticity in Health and Disease</i>, Michelle Monje-Deisseroth, Stanford 		
10:00 am – 10:15 am	Break	Garden Foyer
10:15 am – 12:15 pm	Symposia Sessions	
<i>Molecular Models for Autism Spectrum Disorders</i> Chair: Bryan Luikart, Geisel School of Medicine at Dartmouth Co-Chair: Brady J. Maher, Lieber Institute for Brain Development		Garden Room
Presenters: <ul style="list-style-type: none"> • <i>Do Defects in Oligodendrocytes Contribute to Pathophysiology in Autism Spectrum Disorders?</i>, Brady J. Maher, Lieber Institute for Brain Development • <i>Investigating the Molecular Basis of Autism Using Mouse and Human Brain Organoid Models of Tuberous Sclerosis Complex</i>, Helen Bateup, University of California, Berkeley 		

Thursday, October 17, 2019 (cont'd)

DETAILED AGENDA

10:15 am <i>Molecular Models for Autism Spectrum Disorders</i> Presenters (cont'd): <ul style="list-style-type: none"> <i>Fetal Immune Activation is Required for the Development of Autism-Like Behavior in Mice</i>, Kaoru Saijo, Department of Molecular and Cell Biology, Helen Wils Neuroscience Institute, University of California, Berkeley <i>Studying Macrocephalic Autism Using iPSC</i>, Carol Marchetto, Salk Institute for Biological Studies 		
<i>Natural Sleep Regulation and Psychiatric and Neurologic Diseases Characterized by Dysregulated Sleep</i> Chair: Hanna M. Ollila, Stanford University Co-chair: Jacqueline Lane, Massachusetts General Hospital, Center for Genomic Medicine and Broad Institute for Harvard and MIT	Waterfront AB	
Presenters: <ul style="list-style-type: none"> <i>A Novel Target to Modulate Wakefulness and Cognition - The Neurosteroid Approach</i>, Martin Schalling, Karolinska Institutet <i>Sleep Control Across Lifespan</i>, Shibin Li, Stanford University <i>Shared Genetic Underpinnings of Sleep and Psychiatric Disorders</i>, Jacqueline Lane, Massachusetts General Hospital, Center for Genomic Medicine and Broad Institute for Harvard and MIT <i>USF Transcription Factors Regulate Sleep and Circadian Rhythms</i>, Nasa Sinnott-Armstrong, Stanford University 		
12:15 pm – 2:00 pm	Mid-day Break (Lunch on Own)	
2:00 pm – 3:00 pm	Plenary Session	Garden Room
<i>Molecular, Cellular and Circuit-Level Control of Social Behaviors</i> , Catherine Dulac, Harvard University, Higgins Professor of Molecular and Cellular Biology		
3:00 pm – 3:15 pm	Break	Garden Foyer
3:15 pm – 5:15 pm	Symposia Sessions	
<i>The Role of Puberty in Brain Maturation: Relevance to Psychiatric Disease Risk</i> Chair: Kristen Delevich, University of California, Berkeley Co-chair: Megan Herting, University of Southern California	Garden Room	
Presenters: <ul style="list-style-type: none"> <i>Pubertal Maturation and Structurally Distinct Amygdala Subregion Development in Children and Adolescents</i>, Megan Herting, University of Southern California <i>Sex-Specific Effects of Puberty on Approach-Avoidance Behavior and Dendritic Spine Pruning</i>, Kristen Delevich, University of California, Berkeley <i>Sexual Differentiation of Neural Circuits of Social Anxiety</i>, Brian Trainor, University of California, Davis <i>The Influence of Puberty on Neural Systems of Social Threat and Reward: Links to Anxiety and Depression Risk</i>, Cecile Ladouceur, University of Pittsburgh 		
<i>Beyond the Central Dogma: From Junk DNA to Brain Disorders</i> Chair: Alexandre Cristino, Griffith Institute for Drug Discovery, Griffith University Co-chair: Hyejung Won, University of North Carolina	Waterfront AB	

Thursday, October 17, 2019 (cont'd)

3:15 pm *Beyond the Central Dogma: From Junk DNA to Brain Disorders*

Presenters (cont'd):

- *Functional Dissection of Neural Enhancers Using Massively Parallel Reporter Assays*, Fumitaka Inoue, School of Pharmacy, University of California, San Francisco
- *Detection on Noncoding Risk Factors for Autism Spectrum Disorder With Whole-Genome Sequencing*, Stephan Sanders, School of Medicine, University of California, San Francisco
- *Connecting Gene Regulatory Relationships to Neurobiological Mechanisms of Brain Disorders*, Hyejung Won, University of North Carolina
- *Unravelling the Functional Effects of Rare microRNA Mutations Identified in Schizophrenia Patients*, Alexandre Cristino, Griffith Institute for Drug Discovery, Griffith University

Friday, October 18, 2019

6:30 am—8:00 am	Breakfast	Garden Foyer
7:00 am – 7:30 pm	Registration	Garden Foyer
8:00 am – 10:00 am	Symposia Sessions	
<i>Synaptic Pathologies in Neurodevelopmental Disorders</i> Chair: Bruce Herring, University of Southern California Co-chair: Kevin Bender, University of California, San Francisco		Garden Room
<p>Presenters:</p> <ul style="list-style-type: none"> • <i>The Role of RhoGEF Proteins in Synaptic Transmission and Neurodevelopmental Disorders</i>, Bruce Herring, University of Southern California • <i>CRISPR Nanoparticle-Mediated Gene Editing in the Mouse Model of Fragile X Syndrome</i>, Hye Young Lee, The University of Texas, Health Science Center at San Antonio • <i>Synaptic Mechanisms of Neurodevelopmental Disorder Risk Factors ANK2 and ANK3</i>, Peter Penzes, Northwestern University • <i>Scn2a Dysfunction in Neurodevelopmental Disorders</i>, Kevin Bender, University of California, San Francisco 		
<i>Proteomic Technologies Applied to Neuroscience</i> Chair: Ruth Hüttenhain, University of California, San Francisco Co-chair: Nevan Krogan, University of California, San Francisco		Waterfront AB
<p>Presenters:</p> <ul style="list-style-type: none"> • <i>Using Proteomic Approaches to Understand the Mechanism of Disease</i>, Nevan Krogan, University of California, San Francisco • <i>Proximity Labeling: Spatiotemporally-Resolved Proteomics and Transcriptomics for Neuroscience</i>, Shuo Han, Stanford • <i>Identification of Spatiotemporally-Resolved GPCR Protein Interaction Networks Regulating Receptor Function</i>, Ruth Hüttenhain, University of California, San Francisco • <i>Mapping the Protein-Protein Interaction Networks of Autism Spectrum Disorder Risk Genes</i>, Yefim Zaltsman, University of California, San Francisco 		
10:00 am – 10:15 am	Break	Garden Foyer

DETAILED AGENDA

Friday, October 18, 2019 (cont'd)

DETAILED AGENDA

10:15 am – 12:15 pm	Symposia Sessions	
<p><i>Neural Circuit Basis of Adult Hippocampal Neurogenesis in Cognition and Emotion</i> Chair: Juan Song, University of North Carolina, Chapel Hill Co-Chair: Amar Sahay, MGH, Harvard University</p>		Garden Room
<p>Presenters:</p> <ul style="list-style-type: none"> • <i>Dysregulation of Hippocampal Adult-Born Neurons Disrupts Brain-Wide Functional Network Associated With Memory</i>, Juan Song, University of North Carolina, Chapel Hill • <i>BMP Regulation of Hippocampal Neurogenesis Mediates the Behavioral Effects of Antidepressants</i>, Jack Kessler, Northwestern University • <i>Neurogenesis, Memory Interference and Generalization</i>, Amar Sahay, MGH, Harvard University • <i>Hippocampal Neurogenesis and Forgetting</i>, Paul Frankland, SickKids, University of Toronto • <i>The Modulatory Function of Adult Hippocampal Neurogenesis: Impact on Mood and Cognition</i>, Rene Hen, Columbia University 		
<p><i>Beyond GWAS – Finding Hidden Genetic Features of Neuropsychiatric Disorders</i> Chair: Donard S. Dwyer, LSU Health Shreveport Co-Chair: Xiao-Hong Lu, LSU Health Shreveport</p>		Waterfront AB
<p>Presenters:</p> <ul style="list-style-type: none"> • <i>Role of Genetic Interactions in Schizophrenia Risk</i>, Merve Kasap, Vanderbilt University • <i>Genetic Variants Affecting Chromatin Accessibility During Human Neuronal Differentiation</i>, Jason Stein, University of North Carolina • <i>Novel Single-Neuron and Genome-Editing Tools to Unravel the Pathogenic Significance of Brain Somatic Mosaicism</i>, Xiao-Hong Lu, LSU Health Shreveport • <i>DNA Epigenetic Modifications in Drug Addiction</i>, Jian Feng, Florida State University 		
12:15 pm – 2:00 pm	Mid-day Break (Lunch on Own)	
2:00 pm – 4:00 pm	Symposia Sessions	
<p><i>Neurotransmitter Transporters and Neuropsychiatric Illness</i> Chair: David E. Krantz, University of California, Los Angeles Co-Chair: Susan Voglmaier, University of California, San Francisco</p>		Garden Room
<p>Presenters:</p> <ul style="list-style-type: none"> • <i>Different Modes of Release for Different Neurotransmitters</i>, Robert H. Edwards, University of California, San Francisco • <i>New Roles for VGLUT in DA Neuron Physiology and Vulnerability</i>, Zachary Z. Freyberg, University of Pittsburgh • <i>Model Systems for Examining Antidepressant Mechanism of Action</i>, David E. Krantz, University of California, Los Angeles • <i>The Ins and Outs of Amphetamine Action</i>, Jonathan A. Javitch, Columbia University 		
<p><i>Maternal Immune Challenge and Neuropsychiatric Disorders</i> Chair: Alex Nord, University of California, Davis Co-Chair: Melissa Bauman, University of California, Davis</p>		Waterfront AB

Friday, October 18, 2019 (cont'd)

DETAILED AGENDA

2:00 pm *Maternal Immune Challenge and Neuropsychiatric Disorders*

Presenters (cont'd):

- *Maternal Immune Activation Perturbs Temporal Progression of Cerebral Cortex Development in Mouse*, Alex Nord, University of California, Davis
- *Chronic Maternal Interleukin-17 and Autism-Related Cortical Gene Expression, Neurobiology, and Behavior*, Serena Gumusoglu, University of Iowa
- *Modeling Gene-Immune Interactions in Altered Neurodevelopment*, Theo Palmer, Stanford University
- *Nonhuman Primate Model of Maternal Immune Activation*, Melissa Bauman, University of California, Davis

4:00 pm – 4:15 pm

Break

Garden Foyer

4:15 pm – 5:30 pm

Poster Talks

Chair: Tracey Petryshen

Garden Room

- *Clinically Actionable Pathways Identified in Individuals With Schizophrenia by Pharmacological Enrichment of Polygenic Risk*, William Reay, School of Biomedical Sciences and Pharmacy, The University of Newcastle, Australia
- *A Candidate Causal Variant Underlying Both Enhanced Cognitive Performance and Increased Risk of Bipolar Disorder*, Susan Shen, University of California San Francisco
- *Association of Primate-Specific Supragranular Enriched Gene Expression With Cortical Thickness Patterns in 22q11.2 Deletion Syndrome*, Gil Hoftman, Semel Institute for Neuroscience & Human Behavior at UCLA
- *High-Throughput Disruption of Enhancers Active During Human Corticogenesis*, Evan Geller, Yale University School of Medicine
- *Loss of Inhibitory Neurons and Perturbed Inhibition in a Syndromic ASD Mouse Model*, Huei-Ying Chen, Lieber Institute for Brain Development
- *The Effect of Ketamine on Fronto-Striatal Circuit Mechanisms Underlying Compulsive Grooming Behavior*, Gwynne Davis, Institute for Neurodegenerative Diseases UCSF
- *Human Induced Pluripotent Stem Cell Derived Neurons Model Circadian Rhythm Abnormalities in Bipolar Disorder*, Himanshu Mishra, Department of Psychiatry and Center for Circadian Biology, University of California San Diego; Psychiatry Service, Veterans Affairs

5:30 pm – 7:30 pm

Poster Session and Reception

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Pharmaceuticals Inc.®

Lower Atrium

Saturday, October 19, 2019

6:30 am—8:00 am

Breakfast

Garden Foyer

7:00 am – 5:15 pm

Registration

Garden Foyer

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Saturday, October 19, 2019 (cont'd)

DETAILED AGENDA

8:00 am – 10:00 am	Symposia Sessions	
<p><i>Pluripotent Stem Cell Models of Rare and Common Genetic Risk for Psychiatric Disorders</i> Chair: Ralda Nehme, Stanley Center for Psychiatric Research, Broad Institute of Harvard and MIT Co-chair: Brady J. Maher, Lieber Institute for Brain Development</p>		Garden Room
<p>Presenters:</p> <ul style="list-style-type: none"> • <i>The 22q11.2 Microdeletion: How Might it Produce Different Neuropsychiatric Phenotypes?</i>, Ralda Nehme, Stanley Center for Psychiatric Research, Broad Institute of Harvard and MIT • <i>Modeling Human Brain Development and Disease at Single Cell Resolution With Brain Organoids</i>, Giorgia Quadrato, Eli and Edythe Broad CIRM Center for Regenerative Medicine and Stem Cell Research at USC • <i>Modeling Schizophrenia and Its Polygenic Risk Using Induced Pluripotent Stem Cell-Derived Neurons</i>, Daniel J. Hiler, Lieber Institute for Brain Development • <i>Developmental Impact of Patient-Specific TCF4 Mutations on the In Vitro Cortical Circuit</i>, Brittany A. Davis, Lieber Institute for Brain Development 		
<p><i>Using Molecular and Neuroimaging Biomarkers to Dissect the Heterogeneity of Psychiatric Illness</i> Chair: Anil Malhotra, Zucker Hillside Hospital Co-chair: Katherine Burdick, Harvard University</p>		Waterfront AB
<p>Presenters:</p> <ul style="list-style-type: none"> • <i>Abnormal Cytokine and Complement C4 Levels in Cerebrospinal Fluid and Plasma Samples of Patients With Schizophrenia and Healthy Volunteers</i>, Juan Gallego, Zucker Hillside Hospital • <i>Data-Driven Brain-Behavior Subtypes Across Disorders</i>, Aristotle Voineskos, University of Toronto • <i>Interaction Between Antipsychotic Exposure and Striatal Connectivity in Psychotic Relapse</i>, José Rubio-Lorente, Zucker Hillside Hospital • <i>Inflammatory Biomarkers of Cognitive Function in Bipolar Disorder</i>, Katherine Burdick, Harvard University 		
10:00 am – 10:15 am	Break	Garden Foyer
10:15 am – 12:15 pm	Symposia Sessions	
<p><i>Towards Precision Psychiatry Through Genomics and Pharmacology</i> Chair: John Kelsoe, University of California, San Diego Co-chair: Alexander Charney, Icahn School of Medicine at Mount Sinai</p>		Garden Room
<p>Presenters:</p> <ul style="list-style-type: none"> • <i>Studying Mood Disorders Using Patient iPSC-Derived Cells In Vitro</i>, Krishna Vadodaria, Salk Institute • <i>Investigating the Mechanisms of Psychotropic Drugs Through Genomics</i>, Alexander Charney, Icahn School of Medicine at Mount Sinai • <i>Modeling Genetic Risk Variants in Schizophrenia</i>, Carl Sellgren, Karolinska Institutet • <i>Identifying Gene Pathways in Lithium Response Using an iPSC Model</i>, John Kelsoe, University of California, San Diego 		

Saturday, October 19, 2019 (cont'd)

DETAILED AGENDA

10:15 am Symposia (cont'd) <i>Circadian Rhythm Abnormalities in Bipolar Disorder: Genetic, Molecular and Behavioral Advances in Human Subjects</i> Chair: Michael McCarthy, University of California, San Diego		Waterfront AB
Presenters: <ul style="list-style-type: none"> • <i>Using Stem Cell Derived Neurons to Model Circadian Rhythm Abnormalities in Bipolar Disorder</i>, Michael McCarthy, University of California, San Diego • <i>Molecular Rhythm Changes in Postmortem Brains From Subjects With Bipolar Disorder and Schizophrenia</i>, Kyle Ketchesin, University of Pittsburgh • <i>Actigraphic Analysis of Bipolar Disorder Patients Reveals Circadian Sub-Phenotypes</i>, Robert Gonzalez, Penn State University • <i>Association of Bipolar Disorder and Clinical Phenotypes With Genetic Variants of Circadian Genes</i>, Suzanne Gonzalez, Penn State University 		
12:15 pm – 2:00 pm	Mid-day Break (Lunch on Own)	
2:00 pm – 3:00 pm	Plenary Session	Garden Room
<i>In Search of the Engram</i> , Mark Mayford, Department of Psychiatry, UCSD School of Medicine		
3:00 pm – 3:15 pm	Break	Garden Foyer
3:15 pm – 5:15 pm	Symposia Sessions	
<i>Excitatory-Inhibitory Dynamics From Synapses to Systems: Bridging Rodents to Humans to Examine how the Brain Responds to Perturbation in Neurodevelopmental Conditions</i> Chair: Grainne McAlonan, King's College London		Garden Room
Presenters: <ul style="list-style-type: none"> • <i>Shank3 is a Critical Determinant of Homeostatic Plasticity</i>, Vedakumar Tatavarty, Brandeis University • <i>Using Multiple Non-Invasive Modalities to Study the Role of Altered Inhibition in Children With Autism Spectrum Disorder</i>, Nick Puts, Johns Hopkins University • <i>Visual Perception as a Window Into Circuit-Level Differences in the Human Autistic Brain</i>, Caroline Robertson, Dartmouth College • <i>Probing Dynamics of Excitation/Inhibition Pathways in Autism Spectrum Condition - A Pharmacological Neuroimaging Approach</i>, Andreia Carvalho Pereira, King's College London 		
<i>Childhood Neuropsychiatric Disorders: From Genes to Biology to Therapy</i> Chair: Stephan J. Sanders, UCSF Co-Chair: Jeremy Willsey, UCSF		Waterfront AB
Presenters: <ul style="list-style-type: none"> • <i>Whole-Exome Sequencing in Tourette Disorder Identifies New Risk Genes and Implicates Cell Polarity in Pathogenesis</i>, Jeremy Willsey, UCSF • <i>Genetic Variation in Autism Spectrum Disorder and Congenital Heart Disease Converges on Common Molecular Networks</i>, Brin Rosenthal, UCSF • <i>Intersection of Autism Spectrum Disorder Gene Orthologs and Presynaptic Homeostatic Plasticity</i>, Özgür Genç, UCSF • <i>Tbr1 Regulates Pathways That Converge on Synaptogenesis in Deep Cortical Layers and Links to Autism Spectrum Disorder Pathophysiology</i>, Siavash Fazel Darbandi, UCSF • <i>Development of a Gene Regulation Therapy to Rescue SCN2A Haploinsufficiency in Autism Spectrum Disorder</i>, Serena Tamura, UCSF 		