MONDAY, JUNE 7
Welcoming Remarks and Keynote Session (Joint) (7am Denver/Mountain Time Start)
*Eric J. Huang, University of California, San Francisco, USA
*Beth Stevens, Boston Children's Hospital, Harvard Medical School, USA
Akiko Iwasaki, Yale University School of Medicine, USA
Manipulating Immune Trafficking In and Out of the CNS
Christopher K. Glass, University of California, San Diego, USA
Exploiting Dynamic Enhancer Landscapes to Infer Pathogenic Mechanisms in Neurodegenerative Diseases
Disease Mechanisms and Therapeutic Targets (Joint) (8:10am Denver/Mountain Time Start)
Holly Kordasiewicz, Ionis Pharmaceuticals, USA
Antisense Oligonucleotides for the Treatment of Neurological Diseases
*Joseph W. Lewcock, Denali Therapeutics, USA
Therapeutic Strategies for the Treatment of Neurodegenerative Disease Based on Human Genetics
*Kate Monroe, Denali Therapeutics, USA
Enhancing Microglia Function with ATV:TREM2
Johan Luthman, Lundbeck, Denmark
Neuroimmunological Target Considerations - To Be or Not To Be in the Brain
Raz Dvir Szternfeld, Weizmann Institute of Science, Israel
Short Talk: TREM2-Independent Neuroprotection Mediated by Monocyte-Derived Macrophages in a Mouse Model of Alzheimer’s Disease
Christiane D. Wrann, Massachusetts General Hospital, USA
Short Talk: Myokine Irisin Is a Critical Regulator of Cognitive Function
Elise Marsan, University of California, San Francisco, USA
Short Talk: Highly Conserved Glial Pathology and Human-Specific Neuronal Pathology Promote Neurodegeneration in FTLD-GRN
Mapping Immune Cell States in Health and Disease (11am Denver/Mountain Time Start) (EK49)
*Francisco J. Quintana, Harvard Medical School and the Broad Institute of MIT and Harvard, USA
*Beth Stevens, Boston Children's Hospital, Harvard Medical School, USA
Mapping Microglia State to Function in Health and Disease
Burkhard Becher, University of Zürich, Switzerland
The T Cell-Myeloid Axis in Neuroinflammation
Shane Anthony Liddelow, New York University Langone Medical Center, USA
Redefining Astrocytes States in Health and Disease
Kevin Guttenplan, Oregon Health & Science University, USA
Short Talk: Identification of a Novel Astrocyte Toxic Factor
Frederick Bennett, University of Pennsylvania, USA
Short Talk: Brain Macrophage Transplantation for Research and Therapy Development
From Therapeutic Targets to Clinic (11am Denver/Mountain Time Start) (EK48)
*Joseph W. Lewcock, Denali Therapeutics, USA
*Charlotte J. Sumner, Johns Hopkins School of Medicine, USA
The Evolving Challenges of Gene Targeted Therapeutics for SMA
Lorenz Studer, Memorial Sloan Kettering Cancer Center, USA
IPSC-Derived Dopaminergic Neurons and Parkinson’s Disease Therapy
Priyanka Narayan, National Institute of Health, USA
Short Talk: Discovering and Reversing the Metabolic Consequences of APOE4 in iPSC-Derived Glia
Poster Session 1 (Joint) (1pm Denver/Mountain Time Start)
TUESDAY, JUNE 8
Genetic Contributions to Neurodegeneration (7am Denver/Mountain Time Start) (EK48)
*Valina L. Dawson, Johns Hopkins University School of Medicine, USA
*Alison Goate, Icahn School of Medicine at Mount Sinai, USA
Human Genetics Implicates Microglial Function in Alzheimer’s Disease Risk
Jennifer Yokoyama, University of California, San Francisco, USA
Immune Contributions to Early-Onset Neurodegenerative Disease
Martine Therrien, Broad Institute, USA
Short Talk: Modeling the Impact of AD Genetic Risk on Microglia States and Function
Andy P. Tsai, Indiana University School of Medicine, USA
Short Talk: Impact of PLCG2 Alzheimer’s Disease Risk Variants on Microglia Biology and Disease Pathogenesis
Neuroimmune Regulation of Sleep and Brain States (7am Denver/Mountain Time Start) (EK49)
*Jonathan Kipnis, Washington University School of Medicine, USA
*Maria Lehtinen, Harvard Medical School, USA
Maiken Nedergaard, University of Rochester, USA
Sleep Regulation and Disease Roles of the Glymphatic System
David M. Holtzman, Washington University, USA
APOE, Innate Immunity, and Neurodegeneration
Marco Colonna, Washington University School of Medicine, USA
ILCs and Sleep
* Session Chair † Invited but not yet accepted     Program current as of November 21, 2021.
For the most up-to-date details, visit https://www.keystonesymposia.org.
Constanze Martha Depp, Max Planck Institute for Experimental Medicine, Germany
[NOT AVAILABLE ON DEMAND] Short Talk: Aging-Associated Myelin Dysfunction Drives Amyloid Deposition in Alzheimer's Disease

Cellular Pathways Targeted by Neurodegeneration (8:20am Denver/Mountain Time Start) (EK48)
*Alison Goate, Icahn School of Medicine at Mount Sinai, USA
*Valina L. Dawson, Johns Hopkins University School of Medicine, USA
Mechanism of A-Synuclein-Mediated Neurodegeneration
Christian Hoffmann, German Center for Neurodegenerative Diseases - DZNE, Germany
Short Talk: Synapsin and Synaptic Vesicle Condensates Recruit alpha-Synuclein
Kathryn M. Hixson, UNC Chapel Hill, USA
Short Talk: Cerebellar Degeneration in ARSACS Disease Linked to Tau Hyperphosphorylation and Membrane-Protein Disruption
Noah Johnson, University of Colorado Anschutz Medical Campus, USA
Short Talk: Identification of Small Molecule Drugs that Target Apolipoprotein E4-Catalyzed Amyloid-B Fibrillation: A New Therapeutic Approach to Alzheimer's Disease

Neuroimmune Crosstalk at Brain Borders (8:30am Denver/Mountain Time Start) (EK49)
*Jonathan Kipnis, Washington University School of Medicine, USA
Lymphatic System Function and Dysfunction
Michal Schwartz, Weizmann Institute of Science, Israel
Boosting Immunity to Combat Alzheimer's Disease
*Maria Lehtinen, Harvard Medical School, USA
Imaging and Probing Choroid Plexus Influence on Brain Development and Function
Richard Daneman, University of California, San Diego, USA
Control of Blood Brain Barrier Development, Function and Dysfunction
Alec Walker, Boston Children's Hospital, USA
Short Talk: The Meninges Function as a Niche for B Lymphopoiesis in Early Life
Justin Rustenhoven, Washington University in St Louis, USA
Short Talk: Skull and Vertebral Bone Marrow Are Myeloid Cell Reservoirs for the Meninges and CNS Parenchyma

Glial Contributions to Neurodegeneration (10:05am Denver/Mountain Time Start) (EK49)
*Mathew M. Blurton-Jones, University of California, Irvine, USA
Marco Prinz, University of Freiburg, Germany
Novel Genetic Tools for Studying Myeloid Cells in the CNS
Ádám Dénes, Hungarian Academy of Sciences, Hungary
Microglia Shape Neuronal and Vascular Responses via Compartment-Specific Purinergic Mechanisms
Anne Schaefer, Icahn School of Medicine at Mount Sinai, USA
Control of Neuron Activity by Microglia
*Michael T. Heneka, German Center for Neurodegenerative Diseases, Germany
Inflammasome Activation in Alzheimer's Disease
Swati Mishra, University of Washington, USA
Short Talk: Depletion of AD Risk Gene Sortilin-Related Receptor (SORL1) Causes Cell-Type Specific Dysfunction of the Endo-Lysosomal Pathway in Human Neurons and Microglia – Implications in Alzheimer’s Disease (AD)
Patrick W. Sheehan, Washington University in St. Louis, USA
Short Talk: Astrocytic BMAL1 Regulates Protein Aggregation in Mouse Models of Alpha-Synuclein and Tau Pathology
Sabina Tahirovic, Deutsches Zentrum für Neurodegenerative Erkrankungen e. V. - DZNE, Germany
Short Talk: Loss of NPC1 Enhances Phagocytic Uptake and Impairs Lipid Trafficking in Microglia

Immune Mechanisms of Synapse Function and Dysfunction (11:10am Denver/Mountain Time Start) (EK49)
*Beth Stevens, Boston Children's Hospital, Harvard Medical School, USA
*Jonathan Kipnis, Washington University School of Medicine, USA
Dorothy Schafer, University of Massachusetts Chan Medical School, USA
Neural-Immune Crosstalk at the Synapse
Betty Diamond, Feinstein Institute for Medical Research, USA
Autoimmune Mechanisms of Cognitive Dysfunction
Borislav Dejanovic, Broad Institute, USA
Short Talk: Synaptic Proteomics in an AD Mouse Model Reveals Complement-Dependent Synapse Elimination by Astrocytes
Susanna Rosi, University of California, San Francisco, USA
Short Talk: Novel Microglia-Mediated Mechanisms Underlying Synaptic Loss and Cognitive Impairment after Traumatic Brain Injury

Meet the Editors (Joint) (1:30pm Denver/Mountain Time Start)
Swapnika Ramu, Cell Press, USA
Gabriel A. Gasque, PLOS Biology, USA
Sophie Morgan, Nature Communications, UK
Tim Spencer, Journal of Cell Biology, USA

Networking Lounge (Joint) (2:30pm Denver/Mountain Time Start)

WEDNESDAY, JUNE 9

Phase Separation, Protein Aggregation and Transmission (7am Denver/Mountain Time Start) (EK48)
Daniel Mucida, Rockefeller University, USA
Neuronal Regulation of Innate Immune Cells

*Elaine Y. Hsiao, University of California, Los Angeles, USA
The Microbiome as a Modifier of Environmental Risk for Cognitive Impairment

Henrique Veiga-Fernandes, Champalimaud Research, Portugal
Neuronal Regulation of Innate Lymphoid Cells

Brian Kim, Washington University School of Medicine, USA
Neuroimmune Regulation of Itch

Francisco J. Quintana, Harvard Medical School and the Broad Institute of MIT and Harvard, USA
Microbial Regulation of Astrocyte Responses

Charlotte R. Wayne, Columbia University Irving Medical Center, USA
Short Talk: Mechanisms of Th17 Cell-Mediated Microglial Activation and BBB Dysfunction in Post-Infectious Basal Ganglia Encephalitis

Malu G. Tansey, University of Florida, USA
Short Talk: Colitis Disrupts Inflammatory Gene Networks and Nigrostriatal Integrity in the Brain and LRRK2 G2019S Mutant Mice Display Enhanced Vulnerability

Poster Session 2 (Joint) (1:30pm Denver/Mountain Time Start)
Career Roundtable (Joint) (2:30pm Denver/Mountain Time Start)

Holly Kordasiewicz, Ionis Pharmaceuticals, USA
Philip L. De Jager, Columbia University Medical Center, USA
Lorenz Studer, Memorial Sloan Kettering Cancer Center, USA

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