SUNDAY, JUNE 5
Arrival and Registration

MONDAY, JUNE 6
Welcome and Keynote Session (Joint)
Rudolph E. Tanzi†, Massachusetts General Hospital, USA
New Insights into Pathogenesis and Therapeutics Options in Alzheimer’s Disease

Thomas C. Südhof, Stanford School of Medicine, USA
Synapse Biology in Alzheimer’s Disease

Genetics of Neuro-Immune Interactions (Joint)
John Hardy, University College London, Institute of Neurology, UK
Identifying Genetic Variants Contributing to Neurodegenerative Diseases

David Sulzer, Columbia University, USA
Inflammation and Immunity in Parkinson’s Disease

Alison Goate†, Icahn School of Medicine at Mount Sinai, USA
Alzheimer’s Disease Susceptibility Alleles Implicate Endolysosomal Function in Microglia

Short Talk(s) Chosen from Abstracts

Workshop 1: Imaging of the CNS in Health and Disease (Z1)
Short Talks Chosen from Abstracts

Synaptic Mechanisms and Molecular Events (Z2)
Pietro V. De Camilli, Yale University School of Medicine, USA
Synaptic Membrane Endocytosis

Morgan H. Sheng, Broad Institute, USA
Mechanisms of Synapse Loss in Neurodegenerative Disease

Maria Grazia Spillantini, University of Cambridge, UK
Synaptic Dysfunction in Parkinson’s Disease

Volker Haucke, Leibniz Forschungsinstitut für Molekulare Pharmakologie, Germany
Synaptic Vesicle Exo-Endocytosis and Reformation

Short Talk(s) Chosen from Abstracts

Understanding Immune Receptors in the CNS (Z1)
Greg E. Lemke, The Salk Institute for Biological Studies, USA
TAM Receptor Regulation of Neurodegenerative Disease

Shilpa Sambashivan, Proneurotech, Inc., USA
Intracellular Receptors for NAD in Neurodegeneration

Marco Colonna, Washington University School of Medicine, USA
ITAM Signaling in Neurodegeneration

Short Talks Chosen from Abstracts

Poster Session 1

TUESDAY, JUNE 7
Autophagy and Disease (Z2)
Ivan Dikic, Goethe University Medical School, Germany
ER-phagy: From Molecular Principles to Pathogenesis of Neuropathies

Xinnan Wang, Stanford University School of Medicine, USA
Redox Mechanisms in Aging and Neurodegeneration.

Myriam Heiman, Massachusetts Institute of Technology, USA
Genome-wide in vivo CNS Screening Identifies Genes that Modify CNS Neuronal Survival and Mutant Huntingtin Toxicity

Ai Yamamoto†, Columbia University, USA
Selective Autophagy in the CNS

Short Talk(s) Chosen from Abstracts

Microglia, Other Glial Cells and Macrophages in Neurodegenerative Diseases (Z1)
Michael T. Heneka, German Center for Neurodegenerative Diseases, Germany
Detrimental Effects of Inflammasome Activation and ASC Spec as a Plaque Nucleating Event in Alzheimer’s Disease

Rosa C. Paolicelli, University of Lausanne, Switzerland
Metabolic Control of Microglial Function

Marco Prinz, University of Freiburg, Germany
Brain Macrophages in Neurodegenerative Diseases

Speaker to be Announced

Short Talks Chosen from Abstracts

Workshop 2: IPSC and Organoids for the Study of Neurodegeneration (Z1)
Short Talks Chosen from Abstracts

Endolysosomal Dysfunction in Neurodegeneration (Z2)
Dimitri Krainc, Northwestern University, USA
Convergence of Mitochondrial and Lysosomal Dysfunction

Ralph A. Nixon†, New York University, Langone Medical Center, USA
Defective Endolysosomal Function in Disease

Roberto Zoncu, University of California, Berkeley, USA
mTOR and Lysosomes in Nutrient Sensing and Growth Control

Short Talk(s) Chosen from Abstracts

The Role of Brain Immune System in Shaping the CNS connectivity (Z1)
Jun R. Huh, Harvard Medical School, USA
Impact of Gut Bacteria in Neurodevelopmental Abnormalities

Katerina Akassoglou, University of California, San Francisco, USA
Microglia Regulation of Brain Network Hyperexcitability.

* Session Chair  † Invited but not yet accepted  Program current as of May 9, 2021. Meal formats are based on meeting venue.
For the most up-to-date details, visit https://www.keystonesymposia.org.
Anne Schaefer, Mount Sinai School of Medicine, USA
Control of Neuronal Activity by Microglia
Short Talks Chosen from Abstracts

Poster Session 2

WEDNESDAY, JUNE 8

Mitochondrial Defects in Neurodegeneration (Z2)
Dalton James Surmeier, Northwestern University, USA
Bioenergetic Determinants of Selective Neuronal Vulnerability in Parkinson’s Disease
Richard J. Youle, NINDS, National Institutes of Health, USA
Neuroinflammation Stemming from Mitochondrial DAMPs Linked to Parkinson’s Disease Genes and Mitophagy Defects
Yvette C. Wong, Northwestern University, USA
Mitochondria-Lysosome Contact Sites: Roles and Regulation in Homeostasis and Neurodegenerative Diseases
Short Talk(s) Chosen from Abstracts

Application of Next Generation Technologies to Profile Neuro Immune Interactions (Z1)
Frederic Geissmann, Memorial Sloan Kettering Cancer Center, USA
Mosaicism in the Central Nervous System and Neurodegeneration
Li-Huei Tsai, Massachusetts Institute of Technology, USA
The Use of Induced Pluripotent Stem Cells to Model Alzheimer’s Disease
Ido Amit, Weizmann Institute, Israel
The Power of ONE: Immunology in the Age of Single Cell Genomics
Christopher K. Glass, University of California, San Diego, USA
Decoding Microglia Enhancers in Health and Disease
Short Talks Chosen from Abstracts

Workshop: Cellular Pathways Driving Disease (Z2)
Short Talks Chosen from Abstracts

Neuronal Pathways in Disease (Z2)
David M. Holtzman, Washington University, USA
Innate Immunity, ApoE, and Neurodegeneration
Virginia M. Y. Lee, University of Pennsylvania School of Medicine, USA
Pathogenic Neuronal Mechanisms in Parkinson’s and Alzheimer’s
Martin Kampmann, University of California, San Francisco, USA
CRISPR-based Functional Genomics for Neurological Disease
Danielle Posthuma, Vrije Universiteit Amsterdam, Netherlands
BrainScapes
Short Talk(s) Chosen from Abstracts

Brain Immune System in Neuroinflammation (Z1)
Menna Clatworthy†, University of Cambridge, UK
Plasma Cells in the Meninges
Melanie Greter†, University of Zurich, Switzerland
Non-parenchymal Brain Macrophage in Neuroinflammation
Francisco J. Quintana, Harvard Medical School and the Broad Institute of MIT and Harvard, USA
Impact of Aryl Hydrocarbon Receptor in Multiple Sclerosis
Short Talks Chosen from Abstracts

THURSDAY, JUNE 9

Translational Considerations in Neurodegenerative Research (Z2)
Alfred W. Sandrock Jr., Biogen Idec, Inc., USA
Introduction “Challenges of going from Bench to Bedside in Neurology”
Richard Hargreaves†, Bristol-Myers Squibb, USA
Moving Drug Candidates from Drug Discovery into First-in-Human Studies
Carole Ho, Denali Therapeutics Inc., USA
Phase 2 Trial Design Considerations: How to Achieve Proof of Biology and Proof of Efficacy
Short Talk(s) Chosen from Abstracts

Blood Brain Barrier (BBB), Glymphatics and Lymphatics (Z1)
Jonathan Kipnis, Washington University School of Medicine, USA
Meningeal Sinuses and Lymphatics in the Epicenter of CNS Immune Surveillance
Zsuzsanna Fabry†, University of Wisconsin, USA
BBB in Brain Infections
Berislav Zlokovic, University of Southern California, USA
Pericytes Play an Important Role in Maintaining the BBB
Chenghua Gu, Harvard Medical School, USA
Lipid Transport-Dependent Suppression of Caveolae-Mediated Transcytosis in BBB
Short Talks Chosen from Abstracts

Workshop 3: Immunotherapy of Neurodegeneration (Z1)
Short Talks Chosen from Abstracts

Future Directions for Therapeutics (Z2)
Anabella Villalobos, Biogen, USA
Small Molecule Therapeutics for CNS
C. Frank Bennett†, Ionis Pharmaceuticals, Inc., USA
Oligonucleotide-based Therapeutic Approaches
Speaker to be Announced

Short Talk(s) Chosen from Abstracts

Aging, Metabolism and Neurodegeneration (Z1)
Katrin Andreasson, Stanford University, USA
Myeloid Cell Metabolism in Aging
Tony Wyss-Coray, Stanford University School of Medicine, USA
Systemic Regulation of Brain Aging
Douglas R. Green, St. Jude Children's Research Hospital, USA
Autophagy in Alzheimer’s Disease

Meeting Wrap-Up: Outcomes and Future Directions (Organizers) (Z2)
Meeting Wrap-Up: Outcomes and Future Directions (Organizers) (Z1)

FRIDAY, JUNE 10
Departure