**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  
*Christopher K. Glass*, University of California, San Diego, USA  
*Kevin Guttenplan*, Oregon Health & Science University, USA

**Disease Mechanisms and Therapeutic Targets (Joint) (8:10am Denver/Mountain Time Start)**

**Holly Kordasiewicz**, Ionis Pharmaceuticals, USA  
**Joseph W. Lewcock**, Denali Therapeutics, USA  
**Kate Monroe**, Denali Therapeutics, USA  
**Johan Luthman**, Lundbeck, Denmark  
**Raz Dvir Szternfeld**, Weizmann Institute of Science, Israel  
**Christiane D. Wrann**, Massachusetts General Hospital, USA  
**Elise Marsan**, University of California, San Francisco, USA  
**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  
*Shane Antony Liddelow*, New York University Langone Medical Center, USA

**Neuroimmune Interactions in Health and Disease (EK49)**

**Scientific Organizers**: Beth Stevens, Jonathan Kipnis and Kate Monroe  
**June 7-9, 2021 • Virtual at your computer**  
**Sponsored by Cell Research, Synthego, and Ultragenyx Pharmaceutical Inc.**

**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

**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

**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

For the most up-to-date details, visit [https://www.keystonesymposia.org](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 Fibrillization: A New Therapeutic Approach to Alzheimer's Disease

Neuroimmune Crosstalk at Brain Borders (8:30am Denver/Mountain Time Start) (EK48)

*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

Gliai Contributions to Neurodegeneration (10:05am Denver/Mountain Time Start) (EK48)

*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)
**NEURODEGENERATIVE DISEASES: GENES, MECHANISMS AND THERAPEUTICS (EK48)**

**Scientific Organizers:** Eric J. Huang, Alison Goate and Richard M. Ransohoff

**Sponsored by BlueRock Therapeutics, Cell Research, Genentech, Ionis Pharmaceuticals, Inc. and Ultragenyx Pharmaceutical Inc.**

**NEUROIMMUNE INTERACTIONS IN HEALTH AND DISEASE (EK49)**

**Scientific Organizers:** Beth Stevens, Jonathan Kipnis and Kate Monroe

**June 7-9, 2021 • Virtual at your computer**

**Sponsored by Cell Research, Synthego, and Ultragenyx Pharmaceutical Inc.**

**SESSIONS**

1. **Neuro-Immune Interactions in the Aging Neurogenic Niche**
   - *Anne Brunet*, Stanford University, USA
   - *Sonia Garel*, INSERM, France
   - *Sjors Scheres*, MRC Laboratory of Molecular Biology, UK

2. **Immunological and Transcriptomic Analysis of the Aging Brain (8:45am Denver/Mountain Time Start) (EK48)**
   - *Richard M. Ransohoff*, Third Rock Ventures, USA
   - *Li-Huei Tsai*, Massachusetts Institute of Technology, USA
   - *Philip L. De Jager*, Columbia University Medical Center, USA
   - *Anne Brunet*, Stanford University, USA
   - *Carlos Cruchaga*, Washington University School of Medicine, USA
   - *Frauke Zipp*, University of Pennsylvania School of Medicine, USA

3. **Modeling Neuro-Immune Interactions in Neurodegeneration (11am Denver/Mountain Time Start) (EK48)**
   - *Gloria Choi*, Massachusetts Institute of Technology, USA
   - *Jeffrey Stogsdill*, Harvard University, USA
   - *Hui-Hsin Tsai*, Biogen, USA
   - *Fred H. Gage*, The Salk Institute for Biological Studies, USA

4. **T Cell Brain Communication (9:20am Denver/Mountain Time Start) (EK49)**
   - *Dorothy Schafer*, University of Massachusetts Chan Medical School, USA
   - *Burkhard Becher*, University of Zürich, Switzerland
   - *Anthony J. Filiano*, Duke University, USA
   - *Frauke Zipf*, Johannes-Gutenberg-Universität Mainz, Germany
   - *Celia E. Shiau*, University of North Carolina at Chapel Hill, USA
   - *Stefan Bittner*, University Medical Center Mainz, Germany
   - *Ethan G. Hughes*, University of Colorado Anschutz Medical Campus, USA

**SESSION CHAIRS**

- *Paul Taylor*, St. Jude Children's Research Hospital, USA
- *Richard M. Ransohoff*, Third Rock Ventures, USA
- *Virgina M. Y. Lee*, University of Pennsylvania School of Medicine, USA
- *J. Paul Taylor*, St. Jude Children’s Research Hospital, USA
- *J. Paul Taylor*, St. Jude Children’s Research Hospital, USA
- *J. Paul Taylor*, St. Jude Children’s Research Hospital, USA
- *J. Paul Taylor*, St. Jude Children’s Research Hospital, USA

**SPEAKERS**

- *Ethan G. Hughes*, University of Colorado Anschutz Medical Campus, USA
- *Jonathan P. Godbout*, Ohio State University, USA
- *Sonia Garel*, INSERM, France
- *Gloria Choi*, Massachusetts Institute of Technology, USA
- *Jeffrey Stogsdill*, Harvard University, USA
- *Hui-Hsin Tsai*, Biogen, USA
- *Fred H. Gage*, The Salk Institute for Biological Studies, USA

**SPONSORED BY**

- *BlueRock Therapeutics*, Cell Research, Genentech, Ionis Pharmaceuticals, Inc.

**SCIENTIFIC ORGANIZERS**

- *Beth Stevens*, University of Zürich, Switzerland
- *Jonathan Kipnis*, University of Virginia, USA
- *Kate Monroe*, University of Zürich, Switzerland

For the most up-to-date details, visit [https://www.keystonesymposia.org](https://www.keystonesymposia.org)
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**