

# ISMND NextGen 2023 Conference Program

**DAY 1: AUGUST 23, 2023 (Eastern Daylight Time/EDT) 8:30 AM – 1:30 PM**

8:30 - 8:40	<b>WELCOME REMARKS</b> <i>Henrietta Nielsen, President of ISMND</i>
8:40 - 9:40	<b>SESSION 1: <i>Molecular and Cellular Mechanisms Implicated in Neurodegeneration.</i></b> Chairs: <i>Katarina Dittlau, University of Copenhagen, Denmark</i> <i>Lindsey Goodman, Baylor College of Medicine, USA</i>
8:40 – 8:47	<b>S1.1 Chronic lysosomal dysfunction induced differential changes in circRNAs levels in an Alzheimer's disease mouse model</b> <i>Skarleth Cardenas Romero, Harvard Medical School, USA</i>
8:47 – 8:54	<b>S1.2 Defective lysosomal acidification contributes to TNF-TNFR1 mediated neuronal death</b> <i>Chih Hung Lo, Nanyang Technological University Singapore, Singapore</i>
8:54 – 9:01	<b>S1.3 Lipophorin Receptors Genetically Modulate Neurodegeneration Caused by Psn Knockdown in the Aging Drosophila Brain</b> <i>Chen Zhang, Harvard Medical School, USA</i>
9:01 – 9:08	<b>S1.4 Resistant and vulnerable motor neurons show unique temporal gene regulation in SOD1G93A ALS</b> <i>Irene Meij, Stockholm University, Sweden</i>
9:08 – 9:15	<b>S1.5 Glial Tau is required for lipid droplet formation and protection against ROS</b> <i>Lindsey Goodman, Baylor College of Medicine, USA</i>
9:15 – 9:22	<b>S1.6 Derailed protein turnover in the aging mammalian brain</b> <i>Nalini Rao, Northwestern University, USA</i>
9:22 – 9:40	<b>Q&amp;A SESSION</b>
9:40 – 10:00	<b>BREAK</b>
10:00 – 11:05	<b>SESSION 2: <i>Applications of human cell models in neurodegeneration research.</i></b> Chairs: <i>Amanada McQuade, University of California-San Francisco, USA</i> <i>Hayk Davtyan, University of California-Irvine, USA</i>
10:00 – 10:07	<b>S2.1 Long Noncoding RNA MEG3 Modulates Neuronal Necroptosis in Alzheimer's disease</b> <i>Sriram Balusu, KU Leuven, Belgium</i>
10:07 – 10:14	<b>S2.2 Reproducible and controllable human iPSC-derived cortical tissue models to investigate Alzheimer's disease</b> <i>Julien Klimmt, LMU Munich, Germany</i>
10:14 – 10:21	<b>S2.3 Optic nerve head astrocyte response to biomechanical strain using a 3D hydrogel system</b> <i>Ana Nicolle Strat, SUNY Upstate Medical University, USA</i>
10:21 – 10:28	<b>S2.4 Development of a human iPSC-based FTD model showing advanced</b>

	<b>Tauopathy phenotypes</b> <i>Angelika Dannert, LMU Munich, Germany</i>
10:28 – 10:35	<b>S2.5 iPSC-Microglia Transplantation Prevents Pathology in CSF1R FIRE/FIRE Chimeric Mouse Model of ALSP</b> <i>Jean Paul Chadarevian, University of California-Irvine, USA</i>
10:35 – 10:42	<b>S2.6 Transdifferentiation: a novel tool for disease modeling and mechanistic investigation in Alzheimer's disease</b> <i>Ching-Chieh (Ian) Chou, Stanford University, USA</i>
10:42 – 10:49	<b>S2.7 Uncovering novel regulators of an interferon-responsive microglial state</b> <i>Amanda McQuade, University of California-San Francisco, USA</i>
10:49 – 11:05	<b>Q&amp;A SESSION</b>
11:05 – 11:20	<b>BREAK</b>
11:20 – 12:20	<b>KEYNOTE PRESENTATION</b> <b>Genomic approaches to study Alzheimer's disease</b> <i>David Gate, Northwestern University, USA</i> Chair: <i>Robert Vassar, Northwestern University, USA</i>
12:20 – 1:20	<b>PANEL DISCUSSION: Disease Models - Road to Translation</b> Panel Host: <i>Hui Zheng, Baylor College of Medicine, USA</i> Panelists: <i>Bruce Lamb, Indiana University, USA</i> <i>Julia TCW, Boston University, USA</i> <i>Jeroen Hoozemans, Amsterdam UMC, The Netherlands</i> <i>Kristine Freude, University of Copenhagen, Denmark</i> <i>Sriram Balusu, KU Leuven, Belgium</i>
1:20 – 1:30	<b>CLOSING REMARKS</b> <i>Lucy Job, ISMND and Molecular Neurodegeneration, USA</i>

Recorded poster presentations and commercial advertisements are available on-demand throughout the meeting, until October 24, 2023.

## DAY 2: AUGUST 24, 2023 (Eastern Daylight Time/EDT) 8:30 AM – 1:30 PM

8:30 - 8:40	<b>GOOD MORNING ADDRESS</b> <i>Diane Bovenkamp, BrightFocus Foundation, USA</i>
8:40 - 9:40	<b>SESSION 3: Sex, Vascular, Peripheral, and Systematic Factors</b> Chairs: <i>Lesley Golden, University of Kentucky, USA</i> <i>Julia TCW, Boston University, USA</i>
8:40 – 8:47	<b>S3.1 Single-nucleus dissection of human brain vasculature and Transcriptomic analysis in Alzheimer’s Disease</b> <i>Na Sun, Massachusetts Institute of Technology, USA</i>
8:47 – 8:54	<b>S3.2 Influence of Androgens in a Mouse Model of Multi-Etiology Dementia</b> <i>Charly Abi Ghanem, Albany Medical College, USA</i>
8:54 – 09:01	<b>S3.3 Mid-life APOE4 to APOE2 ‘Switching’ Alters the Cerebral Transcriptome and Decreases AD Neuropathology</b> <i>Lesley Golden, University of Kentucky, USA</i>
9:01 – 9:08	<b>S3.4 Gut microbiome regulates astrocyte reaction to amyloidosis through microglial dependent and independent mechanisms</b> <i>Sidhanth Chandra, Northwestern University, USA</i>
9:08 – 9:15	<b>S3.5 Meningeal lymphatic drainage regulates oligodendrocytes survival and brain myelination</b> <i>Sofia Pereira das Neves, Mayo Clinic Florida, USA</i>
9:15 – 9:22	<b>S3.6 NMNAT2 supports vesicular glycolysis via NAD homeostasis to fuel fast axonal transport</b> <i>Sen Yang, Indiana University, USA</i>
9:22 – 9:40	<b>Q&amp;A SESSION</b>
9:40 – 10:00	<b>BREAK</b>
10:00 – 11:00	<b>SESSION 4: Searching for new therapeutic approaches to target neurodegenerative diseases</b> Chairs: <i>Luke Dabin (Indiana University, USA)</i> <i>Daniel Twohig (Lund University, Sweden)</i>
10:00 – 10:07	<b>S4.1 Acidic nanoparticles restore lysosomal function and rescue <math>\alpha</math>-syn Induced neuronal cell death in Parkinson's disease</b> <i>Jialiu Zeng, Nanyang Technological University, Singapore</i>
10:07 – 10:14	<b>S4.2 Does blocking arginase/polyamine pathway limit acute glaucomatous retina ganglion cell death?</b> <i>Syed Zaidi, Augusta University, USA</i>
10:14 – 10:21	<b>S4.3 Amelioration of Tau and ApoE4-linked glial lipid accumulation and neurodegeneration with an LXR agonist</b> <i>Alexandra Litvinchuk, Washington University in St Louis, USA</i>
10:21 – 10:29	<b>S4.4 Increased senescence is associated with <math>\alpha</math>-synucleinopathy in the TgA53T mouse model and senolytic treatment delays disease onset</b> <i>Indrani Poddar, University of Minnesota, USA</i>
10:29 – 10:36	<b>S4.5 Alzheimer’s disease associated isoforms of human CD33 distinctively modulate microglial cell responses in 5XFAD mice</b>

*Ghazaleh Eskandari-Sedighi, University of California-Irvine, USA*

10:36 – 10:43 **S4.6 Assessing microglial states in the context of amyloid using targeted single cell profiling**

*Luke Dabin, Indiana University, USA*

10:43 – 11:00 **Q&A SESSION**

11:00 – 11:20 **BREAK**

11:20 – 12:20 **KEYNOTE PRESENTATION**

**Identification and validation of biomarkers for different dementias using antibody-based proteomics**

*Charlotte Teunissen, Amsterdam UMC, The Netherlands*

Chair: *Henrietta Nielsen, Stockholm University, Sweden*

12:20 – 1:20 **PANEL DISCUSSION: *Amyloid-targeted therapy for Alzheimer's disease - Are we there yet?***

Panel Host:

*Guojun Bu, Molecular Neurodegeneration, USA*

Panelists:

*Robert Vassar, Northwestern University, USA*

*Agneta Nordberg, Karolinska Institutet, Sweden*

*Samuel Gandy, Mount Sinai, USA*

*Charlotte Teunissen, Amsterdam UMC, The Netherlands*

*Hussein Yassine, University of Southern California, USA*

*Daryl Rhys Jones, Eisai, USA*

1:20 – 1:30 **AWARD\* CEREMONY & CLOSING REMARKS**

*Guojun Bu, ISMND and Molecular Neurodegeneration, USA*

*Henrietta Nielsen, ISMND, USA and Stockholm University, Sweden*

\*The winner of the *ISMND 2024 PBL Assay Science Travel Fellowship* will be announced in ISMND Science Webinar in September

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