

**International Society for Molecular Neurodegeneration (ISMND) 2024 Conference**  
**Ageing, Immunity and Peripheral Factors in Neurodegenerative Diseases**  
**May 26-29, 2024, Seoul, Korea**

**Day One, Sunday, May 26**

Arrival Day

**Day Two, Monday, May 27**

8:30-8:50      **Welcome remarks**

ISMND 2024 Organizing Committee, BrightFocus Foundation and Local Committee

**8:50-10:30      Session I: Molecular and pathogenic insights of neurodegenerative diseases**

Co-Chair: Guojun Bu and *TBD*

8:50-9:05      When and where does Alzheimer's disease start?

Colin Masters, The Florey Institute of Neuroscience, Australia

9:05-9:20      Exploring the diversity of molecular mechanisms underlying Parkinson's disease

Ted Dawson, Johns Hopkins University, USA

9:20-9:35      Molecular pathology of Alzheimer's disease and disease-modifying therapies

Takeshi Iwatsubo, The University of Tokyo, Japan

9:35-9:50      From molecular mechanisms to development of targeted therapies for neurodegenerative disorders

Dimitri Krainc, Northwestern University, USA

9:50-10:10      Q&As

10:10-11:40      Coffee break/Exhibits

**10:40-12:00      Session II: Genetics and biomarkers of neurodegenerative diseases**

Co-Chair: Henrietta Nielsen and *TBD*

10:40-10:55      Genetics of late-onset Alzheimer's disease implicates a causal role of efferocytosis

Alison Goate, Icahn School of Medicine at Mt Sinai, USA

10:55-11:10      Alzheimer's disease informed by rare genetic mutations

Rudy Tanzi, MGH/Harvard Medical School, USA

- 11:10-11:25 Plasma biomarkers for predicting the microglial phagocytic function in neurodegenerative diseases  
Seung Hyum Kim, Hanyang University, Korea
- 11:25-11:40 Tracking immune changes in dementia using body fluid biomarkers  
Charlotte Teunissen, Amsterdam UMC, The Netherlands
- 11:40-12:00 Q&As
- 12:00-13:30 **Lunch break/Exhibits**
- 12:30-13:30 Special session organized by KSND (TBD)**
- 13:30-14:50 Session III: Aging and peripheral-central interactions in neurodegeneration**  
Co-Chair: Riqiang Yan and *TBD*
- 13:30-13:45 Gut-Neuron Communication in Longevity Regulation  
Meng Wang, Jenela Research Campus, USA
- 13:45-14:00 Gut-brain axis in Alzheimer's disease using patients-derived organoid system  
Inhee Mook-Jung, Seoul National University, Korea
- 14:00-14:15 Role of the gut microbiome in modulation of AD-like pathology in mouse models  
Sam Sisodia, University of Chicago, USA
- 14:15-14:30 Exploring the impact of cellular senescence on brain aging and neurodegeneration  
Miranda Orr, Wake Forest University, USA
- 14:30-14:45 Sphingolipid metabolism in Alzheimer's disease  
Hee Kyung Jin, Kyungpook National University, Korea
- 14:45-15:10 Q&As
- 15:10-15:40 Coffee break/Exhibits
- 15:40-16:40 Short Talk I: BrightFocus Foundation Trainee Presentations**  
Co-Chair: Sharyn Rossi and Preeti Subramanian, BrightFocus Foundation, USA  
Six short talks of 10 min each selected from BrightFocus trainees
- 16:40-17:20 Panel Discussion I: Biomarkers and Therapeutic Strategies**

Panelists: Randall Bateman, Eliezer Masliah, Colin Masters, Takeshi Iwatsubo, Charlotte Teunissen, Seung Hyum Kim

**17:30-19:30 Poster Session I/Welcome reception**

**Day Three, Tuesday May 28**

**8:30-10:10 Session IV: Immunity and inflammation in neurodegeneration**

Co-Chair: Seung Hyum Kim and *TBD*

8:30-8:45 APOE: Role in inflammation and neurodegeneration (Virtual)

David Holtzman, Washington University School of Medicine, USA

8:45-9:00 Microglial pathways and APOE regulating proteins in Alzheimer's disease

Jungsu Kim, Indiana University, USA

9:00-9:15 Inflammation drives aggregate propagation

Seung-Jae Lee, Seoul National University, Korea

9:15-9:30 Phagocytic roles of glial cells in neurodegenerative diseases

Won-Suk Chung, Korea Advanced Institute of Science & Technology, Korea

9:30-9:45 Targeting TREM2 for Alzheimer's disease therapy

Xiaofen Chen, Xiamen University, China

9:45-10:10 Q&As

10:10 – 10:40 Coffee break/Exhibits

**10:40-12:00 Session V: Pathogenic mechanisms of Tau**

Co-Chair: Bob Vassar and *TBD*

10:40-10:55 The good, the bad and the ugly: how tau becomes toxic

Li Gan, Weill Cornell University, USA

10:55-11:10 Tau-induced necroptosis in Alzheimer's disease

Bart De Strooper, KU Leuven/UCL, Belgium/UK

11:10-11:25 Age-related cellular vulnerability to tauopathy

Karen Duff, UCL, UK

11:25-11:40 Altered immune response in young-onset Alzheimer's disease may underlie greater cortical tau pathology

Melissa Murray, Mayo Clinic Jacksonville, USA

11:40-12:00 Q&As

12:00 – 13:30 **Lunch break/Poster Session II**

**13:30-14:50 Session VI: Genomics and proteomics in neurodegeneration**

Co-Chair: Yueming Li and *TBD*

13:30-13:45 Genetic aging in neurodegenerative disorders

Owen Ross, Mayo Clinic Jacksonville, USA

13:45-14:00 Proteogenomic approaches to study neurodegenerative disease

David Gate, Northwestern University, USA

14:00-14:15 Illuminating the proteomic landscape of Alzheimer's disease: Insights from extensive profiling in human brains and mouse models

Junmin Peng, St. Jude Children's Research Hospital, USA

14:15-14:30 Proteomics approaches to identify novel modifiers of tau pathology

Wilfried Rossoll, Mayo Clinic Jacksonville, USA

14:30-14:50 Q&As

14:50-15:20 Coffee break/Exhibits

**15:20-16:20 Short Talk II:** Six short talks of 10 min each selected from submitted abstracts

Co-Chair: Hongmei Li and *TBD*

**16:20-17:00 Panel Discussion II:** New systems and technologies to study aging and neurodegeneration

Panelists: David Gates, Junmin Peng, Meng Wang, Matt Bluton-Jones, Bart De Strooper, [*TBD*]

**Day Four, Wednesday May 29**

**8:30-9:50 Session VII: Novel mechanisms in neurodegeneration**

Co-Chair: Hui Zheng and *TBD*

8:30-8:45 Role of necroptosis in neuronal death and neurodegeneration

Xiaodong Wang, National Institute of Biological Sciences, China

8:45-9:00 Role of TDP-43 splicing repression in Alzheimer's disease exhibiting co-pathology of TDP-43

Philip Wong, Johns Hopkins University, USA

9:00-9:15 Aggregation/spreading of RNA binding proteins in ALS pathogenesis

- Sandrine Da Cruz, KU Leuven, Belgium
- 9:15-9:30 Examining the therapeutic potential of microglial transplantation in chimeric models of AD and FTD  
Matt Blurton-Jones, UC Irvine, USA
- 9:30-9:50 Q&As
- 9:50-10:10 Coffee break/Exhibits
- 10:10-11:30 Session VIII: Neuron and immune mechanisms of eye diseases**  
Co-Chair: Jungsu Kim and *TBD*
- 10:10-10:25 Early events leading to neuronal dysfunction and neurodegeneration in glaucoma  
Adriana Di Polo, University of Montreal, Canada
- 10:25-10:40 The forefront of fight for vision: In vivo genome editing for retinal degeneration  
Jeong Hun Kim, Seoul National University, Korea
- 10:40-10:55 Ocular imaging and artificial intelligence-based approach to study eye diseases  
Carol Cheung, Chinese University of Hong Kong, Hong Kong
- 10:55-11:10 Neuronal regulation of microglia homeostasis in development and disease  
Melanie Samuel, Baylor College of Medicine, USA
- 11:10-11:30 Q&As
- 11:30-11:50 Coffee break
- 11:50-12:50 Short Talk III: Six short talks of 10 min each selected from submitted abstracts**  
Co-Chair: Lucy Job and *TBD*
- 12:50-13:05 BRIGHTFOCUS FOUNDATION TRAVEL FELLOWSHIP AWARD CEREMONY**  
Diane Bovenkamp, BrightFocus Foundation, USA
- 13:05-13:20 SHORT TALK/POSTER AWARDS AND CLOSING REMARKS**