FENS Federation of European Neuroscience Societies

THE BRAIN PRIZE Lundbeck Foundation

The Brain Conferences

Understanding and targeting Alzheimer's disease

5 – 8 May 2019
Rungstedgaard, Denmark

PROGRAMME

Sunday, 5 May 2019	
From 14:00	Arrival and registration
14:30-14:40	Welcome address from the Conference Chairs
Tau, ApoE, and other risk factors	
Session Moderator: Robert Vassar	
14:40-15:20	Neurones, glia and tau pathology **Maria Grazia Spillantini, University of Cambridge, UK**
15:20-16:00	Developing Better Therapies for Alzheimer's Disease: From Tau to Immune Modulation **Lennart Mucke***, Gladstone Institutes of Neurological Disease, USA**
16:00-16:30	Afternoon Snack
16:30-17:10	Conformers of assembled tau **Michel Goedert, MRC Laboratory of Molecular Biology, UK**
17:10-17:20	ApoE attenuates unresolvable inflammation by complex formation with activated C1q **Changjun Yin, Institute for Cardiovascular Prevention (IPEK), Germany**
17:20-17:30	Clustering of Tau Fibrils Impairs the Synaptic Composition of α3-Na+/K+-ATPase and AMPA receptors **Amulya Nidhi Shrivastava, CEA, MIRcen, CNRS, France**

17:30-18:10	Dissecting the role of synaptic pathology in Alzheimer's disease **Tara Spires-Jones, University of Edinburgh, UK**
18:10-18:50	Genomics of neurodegeneration: failure of damage repair is a fundamental mechanism **John Hardy, University College London, UK**
19:00-21:30	Welcome Drink & Dinner

Monday, 6 May 2019	
Prion-like spreading & phase separation	
Session Moderator: Dennis Selkoe	
09:00-09:40	The Various Cellular Responses in Alzheimer's Disease **Bart De Strooper, VIB-KU Leuven, Belgium**
09:40-10:20	The conformational origins of aggregation and strains in tau prions **Marc Diamond, UT Southwestern Medical Center, USA**
10:20-10:50	Group Picture and Coffee Break
10:50-11:30	The impact of Aß seeding on different cell types **Melanie Meyer-Lühmann, Albert-Ludwigs-Universität Freiburg, Germany**
11:30-12:10	Pathological phase transitions in neurodegenerative diseases **Dorothee Dormann, Ludwig Maximilian University of Munich, Germany**
12:10-12:20	Deficiency of Progranulin (PGRN) results in accelerated prion diseases **Caihong Zhu, Institute of Neuropathology, University Hospital Zurich, Switzerland**
12:20-12:30	Whole brain imaging reveals distinct spatiotemporal patterns of Abeta pathology in mouse models of AD **Julie Harris, Allen Institute for Brain Science, USA**
12:30-14:00	Lunch
Amyloid Generation, mechanisms of toxicity and cell death (I)	
Session Moderator: Michel Goedert	
14:00-14:40	The promise and challenge of BACE1 inhibition for Alzheimer’s disease **Robert Vassar, Northwestern University, USA**
14:40-15:20	Proteomics in neuroscience and clinical applications **Matthias Mann, Max Planck Institute of Biochemsitry, Germany**

15:20-15:40	**Poster Spotlights I* (8 presentations, 90 seconds each)**
15:40-17:40	**Poster Session I with Afternoon Snack**
17:40-17:50	Novel Alzheimer risk genes determine the microglia response to amyloid-β but not to TAU pathology **Annerieke Sierksma, VIB - KU Leuven, Center for Brain and Disease Research, Belgium**
17:50-18:00	High-dimensional single-cell mass cytometry analysis in the 5XFAD murine model of Alzheimer´s disease reveals blood and brain remodelling upon PD-L1 immune checkpoint blockade **Javier María Peralta Ramos, Weizmann Institute of Science, Israel**
18:00-18:10	7PA2 cell derived Aeta-alpha but not Abeta causes inhibition of neuronal activity **Michael Willem, LMU University Munich, Germany**
18:10-18:20	Developing a monkey model of Alzheimer's disease **Danielle Beckman, California National Primate Research Center, USA**
19:00 - 21:30	Dinner

Tuesday, 7 May 2019	
Amyloid Generation, mechanisms of toxicity and cell death (II)	
Session Moderator: Christian Haass	
09:00-09:40	Targeting proteopathic seeds in Alzheimer´s disease **Mathias Jucker, University of Tübingen, Germany**
09:40-10:20	Drivers of neurotoxicity in prion diseases **Adriano Aguzzi, Institute of Neuropathology, University Hospital Zurich, Switzerland**
10:20-10:30	Elucidating the contribution of astrocytes on functional network disruptions in a mouse model of Alzheimer's disease **Disha Shah, VIB KU-Leuven, Belgium**
10:30-10:40	Loss of oligodendroglial metabolic support as a trigger of amyloidosis in the aging brain **Constanze Depp, Max Planck Institute for Experimental Medicine, Germany**
10:40-11:00	Coffee break
11:15-15:15	Box Lunch, outing at **Frederiksborg Castle**

15:30-16:10	Targeting soluble Aß oligomers is central to the prevention of Alzheimer's disease **Dennis Selkoe, Harvard Medical School, Center for Neurologic Diseases, USA**
16:10-16:30	**Poster Spotlights II** (9 presentations, 90 seconds each)**
16:30-18:30	**Poster Session II with Afternoon Snack**
18:30-19:10	A vicious cycle of amyloid β-dependent neuronal hyperactivation **Arthur Konnerth, Technical University of Munich, Germany**
19:30-21:30	Dinner

Wednesday, 8 May 2019	
Neuro-immune Interaction and Glia (I)	
Session Moderator: Melanie Meyer-Lühmann	
09:00-09:40	How Microglia Contributes to Synaptic Function and Dysfunction **Beth Stevens, Harvard Medical School, USA**
09:40-10:20	The power of ONE: Immunology in the age of single cell genomics **Ido Amit, Weizmann Institute of Science, Rehovot, Israel**
10:20-10:50	Coffee Break
10:50-11:30	Lymphatics and peripheral immunity in Aging and Alzheimer's disease **Jonathan Kipnis, University of Virginia School of Medicine, USA**
11:30-11:40	Impairment of CSF fluxes and glymphatic system activity in a rat model of Alzheimer's disease **Anna Lenice Ribeiro Xavier, University of Copenhagen, Denmark**
11:40-11:50	Opposite microglial activation stages upon loss of PGRN or TREM2 result in reduced cerebral glucose metabolism **Georg Werner, LMU University Munich, Germany**
11:50-12:00	Probing activity-dependent dynamics of perisynaptic astrocytic processes **Tuamoru Odii, University College London, United Kingdom**
12:00-13:30	Lunch

Neuro-immune Interaction and Glia (II)	
Session Moderator: Beth Stevens	
13:30-14:10	Sex-dimorphic Effects of Microglial Dysfunction in Neurodegeneration **Li Gan, Gladstone Institutes of Neurological Disease, UCSF, USA**
14:10-14:50	The function of TREM2 in neurodegeneration **Marco Colonna, Washington University in St. Louis, USA**
14:50-15:30	The glymphatic system and its importance in neurodegenerative diseases **Maiken Nedergaard, University of Rochester Medical Center/University of Copenhagen, USA/Denmark**
15:30-16:00	Coffee Break
16:00-16:40	Microglial dysfunction in Alzheimer's disease **Christian Haass, LMU Munich & German Center for Neurodegenerative Diseases, Germany**
The amyloid cascade after almost 30 years	
Session Moderator: Bart De Strooper	
16:40-17:20	**Dennis Selkoe, John Hardy, Michel Goedert, Adriano Aguzzi** (10 min. presentations each)
17:20-17:50	Tying it all together: Group Discussion & Closing Remarks Discussion leader: **Bart De Strooper**
19:30-22:00	Gala Dinner & Poster Awards
Thursday, 9 May 2019: Breakfast, departure	

*** Acknowledged aid for travel expenses provided by

SyNergy Munich Cluster for Systems Neurology (SyNergy).

Poster Spotlights I*

Monday, 6 May 2019, 15:20-15:40

(8 presentations, 90 seconds each)

1	Spatial Transcriptomics in an Alzheimer's Disease mouse model reveals a glial activation cluster proximal to amyloid plaques Ashley Lu, VIB-KU Leuven Center for Brain & Disease Research (BE)
2	A whole genome siRNA screen for identification of modulators of prions Merve Avar, University of Zurich, University Hospital Zurich (CH)
3	Novel humanized mouse model of Tauopathies to determine Tau propagation and Tau induced cell death Sriram Balusu, VIB Center for Brain & Disease Research, Leuven (BE)
4	Demonstration of soluble alpha-synuclein oligomers in brain extracts from dementia with Lewy body using size-exclusion chromatography and alpha-synuclein aggregate-specific ELISA Emil Gregersen, Aarhus University (DK)
5	Modeling early Alzheimer’s disease tau pathology in the rat locus coeruleus using somatic transgenesis Hélène Hall, McGill University (CA)
6	PSEN1ΔE9, APPSwe and ApoE4 instigate disparate phenotypes in human iPSC-derived microglia Henna Konttinen, University of Eastern Finland (FI)
7	The molecular mechanism of microglial function in CLEC5A knockout in AD mouse model Pei-Ling Hsieh, National Yang-Ming University (TWN)
8	Potential therapeutic approaches to prevent dendritic spine pathology in the hippocampus of APP/PS1 mice Georgia-Ioanna Kartalou, Institute of Neuro- and Sensory Physiology (DE)

Poster Spotlights II*

Tuesday, 7 May 2019, 16:10-16:30

(9 presentations, 90 seconds each)

1	TDP-43 LOF modifies extracellular Aβ levels and plaque pathology Katherine LaClair, DZNE München (DE)
2	Highly scalable in vitro 3D co-culture system using hiPSC-derived neurons and microglia for modeling Alzheimer's Disease pathology Heyne Lee, AbbVie (DE)
3	Proteomics screen in search for regulators of formation and clearance of neuropathological tau aggregates Michal Lubas, H. Lundbeck A/S & University of Southern Denmark (DK)
4	Understanding Substrate Requirements of γ-Secretase Nadine Mylonas, Deutsches Zentrum für Neurodegenerative Erkrankungen (DE)
5	Proteomic identification of microglial activation markers in CSF of mouse models for neurodegeneration Ida Pesämaa, German Center for Neurodegenerative Diseases (DE)
6	Regulation and Consequences of Tau Spread in CNS Cell Culture and Mouse Models of Tauopathy Jennifer Rauch, University of California, Santa Barbara (USA)
7	IN VITRO Characterization of small molecules targeting TAU propagation Patrick Rodriguez, AC Immune SA (CH)
8	Examining inhibitory synapses in a model for early Alzheimer's disease Marvin Ruiter, University of Utrecht (NL)
9	Using Alzheimer's monocyte-derived microglia to stratify patient responses to neuroinflammatory-modulating compounds Anthony White, QIMR Berghofer Medical Research Institute (AU)