Astrocytes in Brain Function and Disease

Nobel Forum, Campus Solna Karolinska Institutet
June 10-11, 2024

Mon, June 10, 2024

* Abstract book is available in the link

SCAN ME

09:00-09:15	**Opening Remarks**	**Agneta Nordberg & C. Justin Lee**
09:15-11:00	**General biology of astroglia**	**Moderator: Tomas Hökfelt**
09:15-09:40	Evolution of neuroglia: From worm to mammals	*Alexei Verkhratsky, University of Manchester*
09:40-10:05	Evolution of astroglia: From Ape to Man	*Aleksandra Pękowska, Nencki Institute of Experimental Biology PAS*
10:05-10:30	Single-cell biology of astrocytes to interrogate their crosstalk with neurons in health and disease	*Tibor Harkany, ,Medical University of Vienna*
10:30-11:00	**Group Photo time.** / Coffee Break	
11:00-12:05	**Physiology of astroglia**	**Moderator: Ole Petter Ottersen**
11:00-11:25	Sculpting Neural Circuits via Engineered Neuro-Glial Interactions	*Sangkyu Lee, IBS*
11:25-11:45	The role of astrocytic chloride as modulator of neuronal inhibition in epilepsy	*Verena Untiet, University of Copenhagen*
11:45-12:05	Astrocytic Ank2 in Hippocampal Astrocyte Morphogenesis and Memory Formation	*Wongu Youn, IBS*
12:05-12:35	**Panel discussion**	
12:35-13:35	**Lunch**	
13:35-14:50	**Physiology of astroglia**	**Moderator: Milos Pekny**
13:35-14:00	The multifarious roles of astrocyte aquaporins	*Ole Petter Ottersen, Oslo University*
14:00-14:25	Multi-omics approaches to characterize the molecular signatures of human astrocytes in health and disease.	*Jan Mulder, Karolinska Institutet*
14:25-14:50	Single nucleus RNA-seq for PFA-fixed or FFPE tissues by fixative-exchange(FX)-seq and its application to neuroscience	*Chang Ho Sohn, Yonsei University*
14:50-15:20	coffee break	
15:20-17:25	**Imaging of astrocytes in AD**	**Moderator: Maria Lindskog**
15:20-15:45	18F-THK5351 PET tracer for imaging MAO-B-mediated reactive astrocytes in Alzheimer's disease	*Heejung Chun, Yonsei University*
15:45-16:10	Dynamic Reactive Astrogliosis in Alzheimer's disease continuum	*Agneta Nordberg, Karolinska Institutet*
16:10-16:35	Astrocyte induced structural changes in Alzheimer's disease continuum	*Il Han Choo, Chosun University College of Medicine*
16:35-17:00	Alzheimer's disease seen through PET/CT imaging	*Mijin Yun, Yonsei University College of Medicine*
17:00-17:25	Visualization of reactive astrocyte-neuron interaction in Alzheimer's disease using 11C-acetate and 18F-FDG	*Min-Ho Nam, KIST*
17:25-17:55	**Panel discussion**	
17:55-18:10	**Introduction to Horizon Grant**	*Wuhyun Koh, IBS*

Astrocytes in Brain Function and Disease

Nobel Forum, Campus Solna Karolinska Institutet
June 10-11, 2024

Tue, June 11, 2024

09:00-10:40	**Astrocytes in regulation of behavior and cognition**	**Moderator: C Justin Lee**
09:00-09:25	Neural mechanism of affective empathy: a role for myelination?	*Hee-Sup Shin, IBS*
09:25-09:50	Adrenergic control of astrocyte function in cognitive decline	*Robert Zorec, University of Ljubljana*
09:50-10:15	The astrocyte as the gearbox of the brain	*Maria Lindskog, Uppsala University*
10:15-10:40	Astrocytic Ank2 stabilizes long-term synaptic plasticity and remote memory through BDNF-dependent morphogenesis	*Wuhyun Koh, IBS*
10:40-11:10	Coffee Break	
11:00-12:00	**Reactive astrogliosis**	**Moderator: Marcela Pekna**
11:10-11:35	Vulnerability of neural circuits encoding head direction in preclinical Alzheimer's disease	*Tim Viney, University of Oxford*
11:35-12:00	Characterizing early reactive astrogliosis in the thalamus in Alzheimer's disease	*Eunji Cheong, Yonsei University*
12:00-12:30	**Panel Discussion**	
12:30-13:30	**Lunch**	
13:30-14:45	**Astroglial reactivity and inflammation**	**Moderator: Robert Zorec**
13:30-13:55	Targeting C3aR to modulate astrocyte reactivity	*Marcela Pekna, University of Gothenburg*
13:55-14:20	Resolution of inflammation in the brain	*Marianne Schultzberg, Karolinska Institutet*
14:20-14:45	Astrocytic autophagy plasticity modulates Aβ clearance and cognitive function in Alzheimer's disease.	*Hoon Ryu, KIST*
14:45-15:10	Coffee Break	
15:10-16:50	**Astrocytes in stroke**	**Moderator: Agneta Nordberg**
15:10-15:45	Intermediate filaments and reactive astrocytes in stroke and ALS	*Milos Pekny, University of Gothenburg*
15:45-16:10	Fibrotic scarring – the dark side of the glial scar	*Christian Goritz, Karolinska Institutet*
16:10-16:30	Astrocytic hemoglobin is an H2O2-decomposing peroxidase and therapeutic target for Alzheimer's disease	*C. Justin Lee, IBS*
16:30-16:50	Hydrogen Peroxide (H2O2)-induced astrocytic collagen triggers gli al barrier, fibrotic scar, and neuronal death in ischemic stroke	*Jae-Hun Lee, IBS*
16:50-17:20	**Panel Discussion**	
17:20-17:30	**Closing Remarks**	**Agneta Nordberg & C. Justin Lee**