FENS Federation of European Neuroscience Societies

THE BRAIN PRIZE
Founded by the Lundbeck Foundation

The Brain Conferences

Establishment and Maintenance of Brain Cell States

23 – 26 April 2023
Rungstedgaard, Denmark

PROGRAMME

Sunday, 23 April 2023	
From 14:15	*Arrival and registration (35')*
14:50-15:00	*Welcome address from the Conference Chairs (10')*
Afternoon Session Moderator: ***Anne Schaefer***	
15:00-15:40	**Joe Ecker,** Salk Institute for Biological Studies, USA Single-cell DNA methylome and 3D multi-omic atlas of the adult mouse brain (30'+10' Q&A)
15:40-16:20	**Danny Reinberg,** New York University, USA Polycomb, Inheritance and Disease (30'+10' Q&A)
16:20-16:50	Coffee Break (30')
16:50-17:05	Short talk 1 **Phillip Mews,** Icahn School of Medicine at Mount Sinai, USA Epigenome reprogramming underlies cell-type specific priming of striatal gene responses in cocaine relapse
17:05-17:20	Short talk 2 **Vijay Tiwari**, Queen's University Belfast, United Kingdom Phf21b imprints the spatiotemporal epigenetic switch essential for neural stem cell differentiation
17:20-18:10	**Plenary Lecture:** **Claude Desplan,** New York University, USA The generation of neuronal diversity and its evolution (40'+10' Q&A)

19:00-21:30	Welcome Drink & Dinner (2h30')

Monday, 24 April 2023	
Morning Session Moderator: ***Elisabeth Binder***	
09:00-09:40	**Rudolf Jaenisch,** Whitehead Institute, MIT, USA Epigenetic editing and therapeutic approaches to autism (30'+10' Q&A)
09:40-10:20	**Jens Bruening,** Max Planck Institute for Metabolism Research, Germany Hypothalamic neurocircuit integration of internal state (30'+10' Q&A)
10:20-10:50	Group Picture & Coffee Break (30')
10:50-11:30	**Agnete Kirkeby,** University of Copenhagen, Denmark Modelling and repairing the human brain with stem cells (30'+10' Q&A)
11:30-12:10	**Ype Elgersma,** Erasmus University Medical Center, Netherlands The role of UBE3A in neurodevelopment and implications for ASO therapy (30'+10' Q&A)
12:10-12:50	**Jeanne Lawrence,** University of Massachusetts Medical School, USA Silencing Trisomy 21 with XIST Reveals Insights Into Down Syndrome Neurodevelopment and Chromatin Plasticity (30'+10' Q&A)
12:50-14:00	Lunch (1h10')
Afternoon Session Moderator: ***Jens Bruening***	
14:00-14:40	**Nael Nadif Kasri,** Radboud University Medical Centre, Netherlands Dissecting the cell-type specific role of disease-associated chromatin remodellers in neuronal network function (30'+10' Q&A)
14:40-15:20	**Elisabeth Binder,** Max Planck Institute of Psychiatry, Germany Modeling the impact of prenatal stress on brain development: use of cerebral organoids (30'+10' Q&A)
15:20-15:35	European Journal of Neuroscience (EJN) presentation (15')
15:35-15:50	Short break (15')

15:50-16:10	**Poster Spotlights I * (9 presentations, 90 seconds each)** (approx. 20')
16:10-18:10	**Poster Session I** (2h)
19:00-21:30	Dinner (2h30')

Tuesday, 25 April 2023	
Morning Session Moderator: ***Anne Brunet***	
09:00-09:40	**Julio Perez**, Max Planck Institute for Brain Research, Germany Exploring Subcellular Diversity in Neuronal Circuits: Advanced Transcriptomic Approaches to Study Compartment-specific RNA Profiles (30'+10' Q&A)
09:40-10:20	**Silvia Cappello**, Max Planck Institute for Psychiatry, Germany Extracellular Signaling in Neurodevelopmental Disorders (30'+10' Q&A)
10:20-10:35	Short talk 3 **Susanne Falkner,** University of Basel, Switzerland Patterned activity driven molecular diversification during neonatal cortical circuit formation
10:35-11:00	Coffee Break (25')
11:15-15:15	*Social programme (4h)*
Afternoon Session Moderator: ***Ype Elgersma***	
15:30-16:10	**Alex Joyner,** Sloan Kettering Institute, US Stem cell flexibility underlying brain development and repair (30'+10' Q&A)
16:10-16:50	**Elly Tanaka,** Research Institute of Molecular Pathology, Austria Molecular control of floorplate self-organization in neural organoids (30'+10' Q&A)
16:50-17:00	End of the day: Group discussion and short break (10')
17:00-17:20	**Poster Spotlights II ** (8 presentations, 90 seconds each)** (approx. 20')

17:20-19:20	**Poster Session II** (2h)
19:30-21:30	Dinner (2h)

Wednesday, 26 April 2023	
Morning Session Moderator: ***Agnete Kirkeby***	
09:00-09:40	**Anne Brunet,** Stanford University, USA Mechanisms of brain aging and rejuvenation (30'+10' Q&A)
09:40-10:20	*To be confirmed*
10:20-10:50	Coffee Break (30')
10:50-11:30	**Andrea Brand,** Gurdon Institute, University of Cambridge, United Kingdom Time To Wake Up: Regulation of Neural Stem Cell Quiescence (30'+10' Q&A)
11:30-11:45	Short talk 4 **Sahba Seddighi,** University of Oxford, United Kingdom Mis-spliced transcripts generate de novo proteins in TDP-43-related ALS/FTD
11:45-12:25	**Adrian Bird**, University of Edinburgh, United Kingdom Understanding the molecular basis of Rett syndrome (30'+10' Q&A)
12:30-14:00	Lunch (1h30')
Afternoon Session Moderator: ***Adrian Bird***	
14:00-14:40	**Anne Schaefer**, Max Planck Institute for Biology of Ageing, Germany, Icahn School of Medicine at Mount Sinai, USA Plasticity of microglia functional states (30'+10' Q&A)
14:40-14:55	Short talk 5 **Emily Osterweil,** University of Edinburgh, United Kingdom The long and short of altered mRNA translation in Fragile X syndrome
14:55-15:10	Short talk 6 **Fekrige Selimi,** Collège de France, France Transient molecular changes and lasting synaptic effects in the cerebellum of a mouse model of schizophrenia
15:10-15:30	Coffee Break (20')

15:30-16:20	**Plenary Lecture:** **Michael Greenberg,** Harvard University, USA Experience-dependent control of brain development and function (40'+10' Q&A)
16:20-16:40	*Closing Remarks (20')*
18:00-19:00	Pre-dinner Drinks (1h)
19:00-22:00	Gala Dinner & Poster Awards (3h)

Thursday, 27 April 2023
Breakfast & departure

Poster Spotlights I *

Monday, 24 April 2023

15:50-16:10

9 presentations, 90" each:

Maela Paul, College de France, France

Synapse-specific molecular rules control the development of excitatory synapse diversity

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Michelle Ninochka DSouza, Institute for Stem Cell Science and Regenerative Medicine, India

Fragile X Mental Retardation Protein interacts with C/D Box snoRNA in the nucleus to regulate ribosome heterogeneity along neuronal differentiation

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Michael Lattke, Imperial College London, United Kingdom

Identification of defects of human cortical neuron development in Down syndrome using single cell transcriptomics

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Johan Holmberg, Umeå Universitet, Sweden

The role of PRC2-mediated gene repression for the maintenance of differentiated dopaminergic and serotonergic neuronal identity

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Aarthi Krishnan, Uppsala University, Sweden

To establish the molecular mechanism taking place during the transformation of worker ants to gamergates in Harpegnathos saltator

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Theresa Kagermeier, Hertie Institute for Clinical Brain Research, Germany

Human organoid model of PCH2a recapitulates brain region-specific pathology

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Jacky Guy, University of Edinburgh, United Kingdom

DNA base editing of MeCP2 C-terminal deletions as a therapy for Rett syndrome

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Kitty Murphy, Imperial College London/UK DRI, United Kingdom

Investigating epigenetic regulation of microglia in a human-mouse chimera model of Alzheimer's disease

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Sandra Siegert, ISTA (Institute of Science and Technology Austria), Austria

A sexual dimorphic microglia response modulates visual cortex network activity after ketamine-anesthesia

Poster Spotlights II **

Tuesday, 25 April 2023

17:00-17:20

8 presentations, 90” each:

Andrew Aldridge, Duke University, United States

Replication dependent linker histone H1.4 continues to accumulate in post-mitotic neurons

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Marcel Jüngling, Max Planck Institute for Brain Research, Germany

Transcriptomic characterization of synapse types and states

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Stefan Dvoretskii, TU Munich/DTU, Germany

Transfer Entropy for Activity Analysis of iPSC-derived Neuronal Cell Colonies

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Poornemaa Natarajan, Ludwig Maximilian University of Munich, Germany

Exploring transcriptional cascades in cortical astrocytes: the role of Sox9 and Trps1

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Lea Cohen, Hebrew University, Israel

Delineating the immediate molecular consequences of the glioblastoma associated H3.3K27M mutation during neural differentiation

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Theodora Chalatsi, University of Lausanne, Switzerland

Autophagy in parvalbumin interneurons is required for inhibitory transmission and memory via regulation of synaptic proteostasis

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Katie Paton, University of Edinburgh, United Kingdom

The role of ASD associated genes in neurodevelopment versus neuronal maintenance

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Dorottya Ralbovszki, University of Copenhagen, Denmark

Single Cell Mapping the Evolution of the Spatial Processing Centre within the Brain