3rd international symposium organized by GRK2162

Developmental Processes in CNS Plasticity and Pathogenesis

Max Planck Institute for the Science of Light, Staudtstrasse 2, 91058 Erlangen

Day 1 - 9th of April 2025

10:00-11:00 11:00-12:30

Registration

Session 1: Molecular principles of neurodevelopment

Hynek Wichterle: Neuronal time-turner: Transcriptional reprogramming of spinal motor neuron age in the context of ALS

Short talk: Neuronal subtype specification of spinal projection and motor neurons by a common temporal sequence (Laia Caudet Segarra)

Joaquina Delas: Cis-regulatory strategies integrating spatial and temporal patterning in the vertebrate neural tube

Short talk: N6-methyladenosine mRNA modification is necessary and sufficient for repetitive transcranial magnetic stimulation induced plasticity (Elli-Anna Balta)

12:30-14:00

Round table lunch with speakers

14:00-15:00

1 1.00 10.00

15:00-17:00

Flash talk I

Poster session I

17:00-18:30

Session 2: Cell biological principles of neurodevelopment

Baptiste Libé-Philippot: Elucidating the cellular and molecular divergence of human neurons

Short talk: Direct lineage reprogramming as a heuristic approach to identify key players in human neurogenesis (Linda Petrucci)

Sebastian Jessberger: Molecular and functional heterogeneity of neural stem cells across lifespan

Short talk: Modulation of germ layer differentiation in early development by the SOXC transcription factor SOX11 (Alexander von Eyb)

19:30-22:00

Dinner at TIO Rustica, Ludwig-Erhard-Straße 13, 91052 Erlangen

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Day 2 - 10th of April 2025

9:00-10:15 Session 3: Adult neurogenesis

Helena Mira: Ageing and rejuvenation of neural stem cell niches

Short talk: Assessing the functional role of niche astrocytes in regulation of adult hippocampal neurogenesis (Evangelia Masouti)

Darcie Moore: Dynamics underlying neural stem cell quiescence exit

10:15-10:45 Coffee

10:45-12:45 **Session 4**: Neural networks

Francesco Martini: Spontaneous activity: A master regulator of brain circuits development

Short talk: Investigating the role of Nup153 in neuronal responsiveness and its link to cognition (Maria Ludovica Sforza)

Sofia Grade: From sight to scent: Reorganization of sensory networks upon traumatic brain injury

Short talk: Deregulated translational control and somatosensory function in genetic models of autism spectrum disorders in Drosophila (Yan Tang)

Short talk: Temporal dissection of cellular and molecular features underlying direct fate conversion (Filippo Zoppi)

12:45-14:00 Round table lunch with speakers

14:00-15:00 Flash talk II

15:00-17:00 **Poster session II**



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17:00-18:30 **Session 5**: Neurodevelopmental disorders

Agnese Loda: Escape from X inactivation is directly modulated by levels of Xist non-coding RNA

Simon Hippenmeyer: Principles of neural stem cell lineage progression

Hans van Bokhoven: IPSC-derived neurons to dissect mechanisms of disease in neurodevelopmental disorders and preclinical therapeutic testing

18:30-22:00 Social Get-Together with Jillbaag Foodtruck

Day 3 - 11th of April 2025

9:00-10:30 **Session 6**: Neuropsychiatric disorders

Nicolas Toni: tba

Short talk: High-throughput phenotyping of fibroblast-derived induced neurons (FiNs) in SPG4-HSP (Klara Metzner)

Eero Castrén: Neuronal plasticity and the antidepressant drug action

Short talk: Contribution of astrocytes to synapse formation in newly generated neurons in the adult hippocampus (Nicholas Chalmers)

10:30-11:00 Coffee break

11:00-12:00 **Session 7**: Ageing and neurodegeneration

Moritz Mall: Safeguarding Neuronal Cell Identity to Prevent Fate Loss in Development and Aging

Ludo Van Den Bosch: Developmental abnormalities of motor differentiated from induced pluripotent stem cells (iPSCs) and their relevance to amyotrophic lateral sclerosis (ALS)

Wrap up and poster prizes

12:00

