

Introductory Remarks to Satellite Symposium (Sat1)

8th Schram Foundation Symposium „From molecular threads to brain networks: the evolutionary tapestry of cognition“

Eugenio F. Fornasiero and Ben H. Cooper, Goettingen

The Schram Foundation, founded by Dr. Armin Schram, has been supporting basic neuroscience research for over 20 years. Traditionally held as a satellite event of the biennial meeting of the German Neuroscience Society, the 8th Schram Foundation Symposium will highlight recently funded projects, feature talks by former awardees, and host two distinguished keynote speakers who will enrich the scientific program. Reflecting the interdisciplinarity of modern neuroscience, the symposium will present state-of-the-art research on the functional nervous system, covering topics ranging from molecular mechanisms and synaptic dynamics to brain connectivity and epigenetic regulatory processes underlying cognition.

Seven leading researchers, each prominent in their respective fields, will provide unique insights into cellular, molecular, and network-level processes shaping brain function and behavior. The symposium will begin with a keynote lecture by Pawel Burkhardt (University of Bergen, Norway), whose research explores the evolution of synapses and traces the molecular and structural origins of these crucial structures. This will be followed by presentations from two fellows: Tomohisa Toda (FAU, Erlangen-Nürnberg), who investigates neurogenesis, brain epigenetics, and RNA biology; and Alessandro Filosa (Max Delbrück Center for Molecular Medicine, Berlin), who studies neuronal signaling and neuromodulation in zebrafish, with a focus on neuropeptidergic circuits involved in stress regulation. Further enriching the program, three previous awardees - Petra Wahle (RUB, Bochum), Britta Qualmann (Friedrich Schiller University, Jena), and Marlene Bartos (University of Freiburg) - will present research on neuronal development and function. Their talks will address activity-driven structural growth in cortical interneurons, the role of membrane dynamics in shaping neuronal functionality, and how dentate gyrus interneurons contribute to encoding contextual information.

The symposium will conclude with a keynote lecture by Anne Schäfer (MPI for Biology of Ageing, Cologne), who will discuss the operational principles of microglia-neuron circuits.

Attendance is complimentary.

Satellite Symposium (Sat1)

Tuesday, March 25, 2025

13:00 - 19:00, Lecture Hall, MPINAT City-Campus
(Hermann-Rein-Str. 3, Goettingen)

Chairs: Eugenio F. Fornasiero and Ben H. Cooper,
Goettingen

- 13:00 **Welcome and Opening Remarks**
Eckart D. Gundelfinger, Magdeburg
- 13:10 Pawel Burkhardt, Bergen, Norway
THE DEEP EVOLUTIONARY ORIGINS OF NEURONS AND NERVOUS SYSTEMS
- 13:55 Tomohisa Toda, Erlangen-Nuremberg
LONG-LIVED RNAS IN THE MAMMALIAN BRAIN
- 14:25 Alessandro Filosa, Berlin
HYPOTHALAMIC NEUROPEPTIDERGIC CIRCUITS CONTROLLING STRESS
- 14:55 **Coffee Break and Poster Session**
- 15:50 Petra Wahle, Bochum
ACTIVITY-DEPENDENT GROWTH OF DENDRITES AND AXONS OF CORTICAL INTERNEURONS
- 16:20 Britta Qualmann, Jena
MEMBRANE SHAPING IN NEURONAL MORPHOGENESIS AND FUNCTION
- 16:50 Marlene Bartos, Freiburg
THE ROLE OF DENTATE GYRUS INTERNEURONS IN ENCODING CONTEXTUAL INFORMATION
- 17:35 **Coffee Break**
- 18:05 Anne Schäfer, Cologne
OPERATIONAL PRINCIPLES OF MICROGLIA-NEURON CIRCUITS
- 18:50 **Closing Remarks**
Dorothea Schulte, Frankfurt/Main