

INHIBITORY NEURONS

From synapses and microcircuits to behavior

8–9 OCTOBER 2026 | Institute for Physiology · Lecture Hall · Hermann-Herder-Str. 7 · Freiburg

THURSDAY, 8 OCTOBER 2026

OPENING

08:45–09:00 **Opening remarks** · *Bartos / Geiger / Harkany*

TOPIC 1 Dynamics of inhibition during learning

CHAIR	<i>Johannes Letzkus (Freiburg, Germany)</i>
09:00–09:30	Ivan Soltesz (Stanford, US) Regulatory mechanisms of perisomatic inhibition
09:30–10:00	Marlene Bartos (Freiburg, Germany) The many facets of dendritic and perisomatic inhibition in the dentate gyrus of behaving mice
10:00–10:30	Lisa Topolnik (Laval, Canada) Neuromodulatory control of hippocampal VIP interneurons during novel experience
10:30–10:45	Young researcher talk · Gamze Güney (MDC Berlin) Thermal encoding by GABAergic inhibitory interneurons in the posterior insular cortex
10:45–11:00	Young researcher talk · Nicole Vissers (UCL London) Cell-Type-Specific Inhibition from the vLGN Shapes Visual Processing in Subcortical Circuits
11:00–11:30	COFFEE BREAK

TOPIC 2 Inhibitory circuits for dendritic processing

CHAIR	<i>Matthew Larkum (Humboldt University Berlin, Germany)</i>
11:30–12:00	Judit Katalin Makara (HUN-REN, Budapest, Hungary) Dendritic mechanisms shaping activity of CA3 pyramidal neurons during navigation
12:00–12:30	Liset Menendez de la Prida (Madrid, Spain) Cell-type-resolved microcircuit dissection of hippocampal activity
12:30–14:00	LUNCH & POSTERS

TOPIC 3 Cross-area signaling

CHAIR	<i>Silvia Viana da Silva (DZNE, Berlin, Germany)</i>
14:00–14:30	Andreas Lüthi (FMI Basel, Switzerland) State-dependent inhibition in amygdala circuits
14:30–15:00	Amar Sahay (Harvard, US) Procognitive restoration of experience-dependent PV IN plasticity in neurodevelopmental disorders
15:00–15:30	Nuno Maçarico da Costa (Allen Brain Institute, US) Cell-type-specific pathways in cortical microcircuits
15:30–15:45	Young researcher talk · Ayelen Groisman (University of Freiburg) Auditory cortex population dynamics mediating perception of ambiguous threat

15:45–16:00	Young researcher talk · Maciej Kania (IST Austria) Ingrams for engrams: Inhibitory-inhibitory plasticity supports the formation of excitatory-inhibitory assemblies that can be recalled through disinhibition
16:00–16:30	COFFEE BREAK

TOPIC 4 Functional Connectomics	
CHAIR	<i>Imre Vida (Charité Berlin, Germany)</i>
16:30–17:10	Peter Jonas (IST Austria) Synaptic transmission in the hippocampal autoassociative CA3 network: From mice to humans, and from experiments to models
17:10–17:40	Zhihao Zheng (Princeton, US) Dense, large-scale electron microscopy reconstruction of regions in the hippocampal formation
17:40–18:10	Zoltán Nusser (HUN-REN, Budapest, Hungary) Molecular mechanisms underlying functional synaptic diversity
18:10–18:40	Renata Batista-Brito (Albert Einstein College, US) TBA

TOPIC 5 Human systems and inhibition

CHAIR	<i>Jonas Sauer (Homburg, Germany)</i>
08:30–09:00	Rodrigo Quian Quiroga (Leicester, UK) A unique coding of memory in the human hippocampus
09:00–09:30	Jörg Geiger (Charité, Berlin) TBA
09:30–09:45	Young researcher talk · Ricardo Paricio-Montesinos (DZNE Bonn) A thalamic inhibitory circuit aligns sensory coding with learned value
09:45–10:00	Young researcher talk · Samuel Eckmann (University of Cambridge) Anti-Hebbian plasticity protects against memory interference
10:00–10:30	COFFEE BREAK

TOPIC 6 Structure and connectivity of inhibitory synapses

CHAIR	<i>Tibor Harkany (Medical University of Vienna, Austria)</i>
10:30–11:00	Ryuichi Shigemoto (IST Austria) Direct measurements of coupling distance in the presynaptic active zone
11:00–11:30	Hannah Monyer (Heidelberg, Germany) Long- and short-range action of GABAergic cells

TOPIC 7 Interneuron development

CHAIR	<i>Simon Hippenmeyer (IST Austria)</i>
11:30–12:00	Laurent Nguyen (University of Liège, Belgium) Evolution shapes cortical interneuron migration
12:00–12:30	Lynette Lim (VIB-KU Leuven, Belgium) Cortical inhibitory neurons exhibit expanding and contracting modes of diversification
12:30–14:30	LUNCH & POSTERS
14:30–15:00	Christian Mayer (MPI Biological Intelligence, Germany) Transcription factor stoichiometry as a code for GABAergic neuron fate
15:00–15:30	Gordon Fishell (Harvard, US) Prox1 directs the migration and specification of superficial cortical interneurons
15:30–16:00	COFFEE BREAK & GROUP PICTURE

TOPIC 8 Population coding

CHAIR	<i>Hannah Monyer (Heidelberg, Germany)</i>
16:00–16:30	Attila Losonczy (Dallas, US) Dynamics and plasticity of inhibition from circuits to dendrites in the hippocampus
16:30–17:00	Henning Sprekeler (TU Berlin, Germany) Why presynaptic inhibition?
17:00–17:30	Julijana Gjorgjieva (TU Munich, Germany) Assembly-based computations through contextual dendritic gating of plasticity

TOPIC 9 Plasticity and neurological disorders	
CHAIR	Marlene Bartos (Freiburg, Germany)
17:30–18:00	Eero Castrén (Helsinki, Finland) Interneuron Plasticity in the Recovery from Mood Disorders
18:00–18:30	Gaia Novarino (IST Austria) TBA