

NEUROSCIENCE WINTER CONFERENCE

14th International

Sölden Austria
April 10-April 14 2012
Central Spa Hotel



Preliminary Scientific Program

Time schedule of plenary lectures, symposia and special interest sessions

Program Committee:

Tobias Bonhoeffer
Nils Brose
Alois Saria
Stephan Schwarzacher

Contributors:

- Austrian Neuroscience
Association
- International Society
for Neurochemistry
- Central Spa Hotel
Sölden

Organizer & Conference Chair:

Alois Saria, Austria

Tuesday April 10

15:00 – 17:00 Registration

17:00 – 17:45 Keynote Lecture 1

Leslie Vosshall (USA)

The Genetics of Innate Behavior: Courtship and Feeding

17:45 – 18:00 Break

18:00 - 20:00 Symposium 1

Neural Circuits and Behavior in Drosophila
(Chair: Alexander Borst)

Ian Meinertzhagen (Canada)

Alexander Borst (Germany)

Michael Dickinson (USA)

Vivek Jayaraman (USA)

Wednesday April 11 Morning

08:15 – 09:00 Keynote Lecture 2

Martin Schwab (Switzerland)

Structural Plasticity and Hardware Repair After CNS Injury

09:00 – 11:00 Symposium 2

Cortical Reorganisation following Brain Injury
(Chairs: Mathias Bähr & Melanie Wilke)

Melanie Wilke (Germany) Reorganisation of spatial networks following reversible lesions in thalamo-cortical circuits: fMRI and single cell studies in monkeys

Christian Gerloff (Hamburg) Reorganisation of the motor network following irreversible brain lesions in stroke patients

Giacomo Koch (Italy) Hyperexcitability of parietal-motor functional connections in the intact left-hemisphere of patients with neglect: combined TMS and MRI studies in human patients

Andreas Luft (Switzerland) Neurophysiology-based approaches for neurorehabilitation

11:00 - 11:30 Coffee Break

11:30 - 13:30 Special Interest Session 1

Accumbens cholinergic interneurons as a therapeutic target in substance-use disorders: basic science (Chair: Gerald Zernig)

Ilka Diester and Karl Deisseroth (USA)

Optogenetic control of accumbens cholinergic interneuron activity in cocaine reward

Louk Vanderschuren (The Netherlands) Local intra-accumbens stimulation of mu opioid receptors and social play: Role of cholinergic interneurons and GABAergic medium spiny neurons

Karine Guilleme (France) Feasibility of studying accumbens network activity with

microelectrode arrays and of correlating electrophysiologic data with neurochemistry

Gerald Zernig (Austria) Possible differential role of accumbens cholinergic interneurons in drug- vs social interaction reward

Wednesday April 11 Afternoon

16:00 – 16:45 Keynote Lecture 3

Edvard Moser (Norway)

Brain Maps for Space

16:45 – 17:15 Coffee Break

17:15 – 19:15 Symposium 3

Axonal Computation of Neurotransmitter Release (Chair: Dimitri Rusakov)

Beverly Clark (UK) Direct measurement of signalling in mammalian central axons

Dominique Debanne (France) Analog-digital signaling in hippocampal axons

Yuji Ikegaya (Japan) Functional and structural roles of axon cables in synaptic output

Nigel Emptage (UK) The role of glutamate autoreceptors in transmitter release

Thursday April 12 Morning

08:15 – 09:00 Keynote Lecture 4

Anne-Marie Craig (Canada)

To be Announced

09:00 – 11:00 Symposium 4

Ubiquitin-Like Proteins in Nerve Cell Development and Synaptic Function and Plasticity (Chairs: Damian Refojo & Nils Brose)

Nils Brose (Germany) Nedd4-family ubiquitin ligases in nerve cell development and differentiation

Damian Refojo (Germany) Needing Neddylation: A role for Nedd8 in neuronal development

Andreas W. Püschel (Germany) Function and regulation of Rap1 GTPases during neuronal differentiation

Azad Bonni (USA) Regulation of neuronal connectivity by ubiquitin signaling

11:00 - 11:30 Coffee Break

11:30 - 13:30: Special Interest Session 2

Conditioned vulnerability elicited by metabolic insults occurring at birth: new paradigms for understanding neuropsychiatric disorders with delayed clinical onset (Chair: Mario Herrera-Marschitz)

Peter J Gebicke-Haerter (Germany) System biology, epigenetics, and beyond: new paradigms and understandings on development of mental diseases.

Andre Fischer (Germany) Epigenetics in schizophrenia

R. Andrew Tasker (Canada) Repetitive insults facilitate disease progression and disease diversity

Mario Herrera-Marschitz (Chile) Asphyxia at birth increases the vulnerability to postnatal metabolic insults

Thursday April 12 Afternoon

16:00 – 16:45 Keynote Lecture 5

Erin Schuman (Germany)

Local Protein Synthesis

16:45 – 17:15 Coffee Break

17:15 – 19:15 Symposium 5

The neurobiology of Sleep (Chair: William Wisden)

Helmut Haas (Germany) Waking with the hypothalamus

Raphaëlle Winsky-Sommerer (UK) Physiology and pharmacology of sleep: novel insights into the role of GABAergic and adenosinergic transmission

Giorgio F. Gilestro (UK) Clues to sleep's function: sleep and learning in Drosophila

William Wisden (UK) Neuronal pathways of sleep and anaesthesia.

19:15 – 20:30 Poster Session

Friday April 13 Morning

08:15 – 09:00 Keynote Lecture 6
Gilles Laurent (Germany)
To be Announced

09:00 – 11:00 Symposium 6
Stem Cells and Neurodegenerative Diseases
(Chairs: Govindan Dayanithi and Eva Sykova)

Zaal Kokaia (Sweden): Stem cells and stroke
Eva Sykova (Czech Republic): Use of stem cells for treatment of neurodegenerative diseases
Lawrence Rajendran (Switzerland): Cellular complexity underlying Alzheimer's Disease
Govindan Dayanithi and Eva Sykova (France and Czech Republic): Calcium homeostasis in stem cells

16:00 – 16:45 Keynote Lecture 7
Idan Segev (Israel)
Inhibiting the Brain - Design Principles

16:45 – 17:15 Coffee Break

17:15 – 19:15 Symposium 7
Imaging neuron subcellular organization and activity; from molecules to function (Chair: Daniel Choquet)

Daniel Choquet (France) A nano-scale view into post synaptic membrane organization and function

Thomas Oertner (Germany) Synaptic plasticity: adjusting weights or changing topology?

Valentin Nägerl (France) Superresolution imaging of glianeuron interactions at synapses

Bernardo Sabatini (USA) Neuromodulatory control of striatal circuitry in the mouse

Antoine Triller (France) The synapse as a statistical nanomachine

19:30 Gala Dinner (free for Central Spa hotel residents, others book at hotel front desk for 50,- €)

08:15 – 10:15 Symposium 8
Neuroethology: Novel Approaches to Studying the Brain in Action (Chair: Georg Keller)

Florian Engert (USA) Whole-brain neural dynamics during rapid motor adaptation in larval zebrafish

Richard Hahnloser (Switzerland) Sensorimotor learning of birdsong without reinforcement

Michael Häusser (UK) Spatial navigation: the view from inside a single cell

Carl Petersen (Switzerland) Synaptic mechanisms of sensory perception

10:15 – 10:45 Coffee Break

10:45 – 12:45 Symposium 9
Neurogenesis and Glial function and dysfunction in aging and neurodegeneration: the ultimate neural symbiosis (Chair: Jose Julio Rodriguez Arellano)

Djoher Nora Abrous (France): Neurogenic changes in aging

Prof. José Julio Rodriguez Arellano (Spain) Neurogenic impairment and recovery in Alzheimer's disease: a concomitant process with glial alterations.

Alexei Verkhratsky (UK): Astroglial ionotropic receptors in neurodegeneration:

gliotransmission vs. neurotransmission

Lydia Vargova (CZ): Changes in CNS diffusion parameters during aging and Alzheimer's disease

12:45 End of meeting and departure

Friday April 13 Afternoon

Saturday April 14

Thursday
April 12
19:15 - 20:30
Poster Session