

ZNZ Symposium 2010

Friday 17 September 2010
Lecture Hall E7, Building HG, ETH Zentrum, Rämistrasse 101, Zürich

- 8:30 – 8:45 **Introduction and overview of neuroscience at McGill University**
- 8:45 – 9:30 Volker-Henn Lecture:
The future of depression research
Prof. Florian Holsboer, Max-Planck-Institut for Psychiatry, Munich
- 9:30 – 10:00 Coffee Break
- 10:00 – 11:30 Parallel Workshops:

Cognitive neuroscience (Lecture Hall D7.1)
Organization: Prof. Isabelle Mansuy and Prof. Alumit Ishai

Alzheimer's disease (Lecture Hall D7.2)
Organization: Prof. Lawrence Rajendran and Prof. Roger Nitsch

Optical imaging of cortical dynamics (Lecture Hall D1.1)
Organization: Prof. Bruno Weber and Prof. Fritjof Helmchen
- 11:30 – 14:00 **Poster Session, Lunch** (Foyers D-Süd, E-Süd)
11:30 **General Assembly of ZNZ Group Leaders** (Lecture Hall E7)
- 14:00 – 15:30 **Brain@McGill workshop: Synapse remodeling and disorders of the nervous system**
Organization: Prof. Anne McKinney, McGill University
- 15:30 – 16:00 Coffee Break

Short Talks:
- 16:00 – 16:15 **How to cope with stress: molecular safety mechanisms for photoreceptor protection**
Prof. Christian Grimm, Department of Ophthalmology, University of Zurich
- 16:15 – 16:30 **Environmental triggers of multiple sclerosis**
Prof. Jan Lünemann, Institute of Experimental Immunology, University Hospital Zurich
- 16:30 – 16:45 **Insights into the neurocircuitry underlying pleasure and pain**
Dr. Chantal Martin-Sölch, Department of Psychiatry, University Hospital Zurich
- 16:45 – 17:00 **Neural computation in distributed VLSI multi-chip systems**
PD Dr. Giacomo Indiveri, Institute of Neuroinformatics, University and ETH Zurich

Short break
- 17:15 – 18:00 Memorial Award Lecture of the Koetser Foundation:
Optogenetics: the development and application of neural control with light
Prof. Karl Deisseroth, Department of Bioengineering, Stanford University
- 18:00 – 18:45 Apéro

Parallel Workshops

Cognitive Neuroscience (Lecture Hall D7.1)

Neural Mechanisms of Human Memory

- 10:00 - 10:10 **Memory consolidation during a nap**
Oliver Marques, PhD student, Department of Psychology, University of Bern
- 10:10 - 10:20 **High semantic precision of subliminal paired-associative encoding**
Simone Duss, PhD student, Department of Psychology, University of Bern
- 10:20 - 10:45 **Recollection and familiarity reflect memory strength**
Prof. Alumit Ishai, Institute of Neuroradiology, University Hospital Zurich

Molecular and Cellular Aspects of Cognitive Functions

- 10:45 - 10:55 **miRNA in the molecular mechanisms of memory**
Bisrat Woldemichael, PhD student, Brain Research Institute, University of Zurich
- 10:55 - 11:05 **Functional contribution of newborn granule cells to hippocampus-dependent behavior**
Oliver Bracko, PhD student, Institute of Cell Biology, ETH Zurich
- 11:05 - 11:30 **Stress and social cognition**
Prof. Carmen Sandi, Laboratory of Behavioral Genetics, EPFL, Lausanne

Alzheimer's Disease (Lecture Hall D7.2)

- 10:00 - 10:30 **Sorting out the cell biology of Alzheimer's disease**
Prof. Willem Annaert, Dept. of Molecular and Developmental Genetics, KU Leuven
- 10:30 - 11:00 **What do transgenic models teach us about preclinical stages of Alzheimer's disease?**
Prof. Claudio Cuello, Dept. of Pharmacology and Therapeutics, McGill University
- 11:00 - 11:15 **DARPINS against Abeta peptides**
Michael Hanenberg, PhD student, Division of Psychiatry Research, University of Zurich
- 11:15 - 11:30 **Cellular signaling mechanisms regulating amyloid production**
Jitin Bali, PhD student, Division of Psychiatry Research, University of Zurich

Optical Imaging of Cortical Dynamics (Lecture Hall D1.1)

- 10:00 - 10:20 **Optical control and measurement of neuronal activity in mouse cortex**
Prof. Carl Petersen, Brain and Mind Institute, EPFL
- 10:20 – 10:40 **Chronic two-photon imaging of barrel cortex population activity in awake head-fixed mice**
Dr. David Margolis, Brain Research Institute, University of Zurich
- 10:40 – 10:55 **Long term two-photon calcium imaging during complex behavior in the head-fixed rat**
Johannes Mayrhofer, PhD student, Institute of Pharmacology and Toxicology, Univ. of Zurich
- 11:00 - 11:15 **One map after another and a result that would make you twitch**
Dr. Arko Ghosh, Institute of Neuroinformatics, University of Zurich and ETHZ
- 11:15 – 11:30 **Imaging across scales: Simultaneous measurement of fMRI BOLD and neuronal Ca²⁺ signals in rat neocortex**
Kristina Schulz, PhD student, Brain Research Institute, University of Zurich
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Brain@McGill Workshop: Synapse Remodeling and Disorders of the Nervous System (Lecture Hall E7)

- 14:00 – 14:30 **GABA type A receptor dysfunction in epilepsy and mental retardation**
Prof. Massimo Avoli, Montreal Neurological Institute, McGill University
- 14:30 – 15:00 **Maturation of glutamatergic synapses containing only AMPA receptors**
Prof. Derek Bowie, Dept. of Pharmacology and Therapeutics, McGill University
- 15:00 – 15:30 **Epigenetic regulation in epilepsy**
Prof. Anne McKinney, Dept. of Pharmacology and Therapeutics, McGill University