



## **NCCR Neuro Concluding Symposium and ZNZ Annual Symposium**

# **Neural Plasticity and Repair, from basic Neuroscience to Therapy**

**June 14-15, 2012, ETH Main Building, Rämistrasse 101, Zurich  
Auditorium Maximum**

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### **Thursday, June 14, 2012**

09.00-09.10      **Welcome** Martin Schwab and Jean-Marc Fritschy

### **The brain in action**    Chair: Hanns Möhler

#### **Systems learning**

09.10-09.40      **Daniel Wolpert** (Cambridge)  
Probabilistic models of sensorimotor control and decision making

09.40-10.00      **Kevan Martin** (Zurich)  
What are all these wires for? The enigma of neocortical circuits

10.00-10.30      **Coffee Break**

#### **Networks in vivo**

10.30-11.00      **Mark Hübener** (Martinsried)  
How sensory deprivation and learning change neuronal responses in mouse  
visual cortex

11.00-11.20      **Fritjof Helmchen** (Zurich)  
Tracking neuronal population activity in mouse somatosensory cortex over weeks

#### **Epigenetics**

11.20-11.50      **Li-Huei Tsai** (Boston)  
Epigenetic gene regulation in neurodegeneration and repair

11.50-12.10      **Isabelle Mansuy** (Zurich)  
The epigenetics of complex brain functions and behaviour



12.10-14.00 Posters and Lunch (Floor E: Main Hall and Foyers E-South, E-North)

**Traces of change** Chair: Lukas Sommer

**Neurogenesis**

- 14.00-14.30 **Magdalena Goetz** (Munich)  
Molecular mechanisms of forebrain neurogenesis in development and adulthood – differences and similarities
- 14.30-14.50 **Sebastian Jessberger** (Zurich)  
Metabolic control of adult neural stem cell activity

**New Networks**

- 14.50-15.20 **Olle Lindvall** (Lund)  
Stem cells and reprogrammed cells for human brain disease
- 15.20-15.40 **Olivier Raineteau** (Zurich)  
Transcriptional control of stem cell behaviors

15.40-16.10 Coffee Break

**Rewiring the CNS after injury** Chair: Armin Curt

**Spinal cord injury**

- 16.10-16.40 **Reggie Edgerton** (Los Angeles)  
Neuromodulation: significance of the enabling concept in the recovery
- 16.40-17.00 **Martin Schwab** (Zurich)  
A ten years team effort in spinal cord repair

**Challenges in Neuroscience** Chair: Martin Schwab

- 17.00-17.40 **Wolf Singer** (Frankfurt)  
Complexity and dynamics: the great challenges in neuroscience

18.00-24:00 Social event: Buffet, beer, band (ETH Dozentenfoyer, Floor J)

19.00-21.00 **Public Forum “Gehirn und Gesundheit”** (Auditorium Maximum)



**Friday, June 15, 2012**

**Rewiring the CNS after injury** Chair: Armin Curt

**Stroke**

- 09.00-09.30 **John Krakauer** (Baltimore)  
From motor learning to motor recovery
- 09.30-09.50 **Andreas Luft** (Zurich)  
From motor recovery to rehabilitation

09.50-10.20 [Coffee Break](#)

**Rehabilitation-Engineering**

- 10.20-10.50 **Mitsuo Kawato** (Kyoto)  
Hyperacuity of neural control: DecNef and robot based rehabilitation
- 10.50-11.10 **Roger Gassert** (Zurich)  
Neurobotics: from neuroscience to robot-assisted assessment and therapy

**The brain under attack** Chair: Anton Valavanis

**Neurooncology**

- 11.10-11.40 **Otmar Wiestler** (Heidelberg)  
Neurooncology from the bench to the bedside
- 11.40-12.00 **Michael Weller** (Zurich)  
Towards personalized cancer care for glioblastoma

12.00-14.00 [Posters and Lunch \(Floor E: Main Hall and Foyers E-South, E-North\)](#)

**Neuroinflammation**

- 14.00-14.30 **Alastair Compston** (Cambridge)  
The basis for treatment in multiple sclerosis
- 14.30-14.50 **Burkhard Becher** (Zurich)  
The brain under immune attack: misunderstood signals



University of  
Zurich <sup>UZH</sup>

**ETH**

Eidgenössische Technische Hochschule Zürich  
Swiss Federal Institute of Technology Zurich



**Neural Plasticity  
and Repair**

National Center of Competence in Research

**ZNZ** Zentrum für Neurowissenschaften Zürich  
Neuroscience Center Zurich

## Neurodegeneration

- 14.50-15.20 **Richard Frackowiak** (Lausanne)  
Computerized image classification in clinical science
- 15.20-15.40 **Roger Nitsch** (Zurich)  
Immunotherapy of neurodegeneration

15.40-16.10 **Coffee Break**

## Protein misfolding

- 16.10-16.40 **Charles Weissmann** (Scripps Florida)  
Darwinian evolution of prions
- 16.40-17.00 **Adriano Aguzzi** (Zurich)  
Mechanisms of prion toxicity
- 17.00 **Concluding remarks**  
Martin Schwab and Jean-Marc Fritschy



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The National Centres of Competence in Research (NCCR) are a research instrument of the Swiss National Science Foundation.