

# rhine – main neuroscience network



2<sup>nd</sup> Biennial Meeting

June 20 - 22, 2012

Jugendherberge Oberwesel  
Auf dem Schönberg  
55430 Oberwesel

## Wednesday, June 20

14:00

Introductory remarks  
Klaus Lieb, Mainz  
Helmuth Steinmetz, Frankfurt

14:15 – 15:00 **Lecture**

Nicola di Stefano  
Dept. of Neurology, Neurosurgery & Behavioral Sciences, *University of Siena*  
Tissue damage in MS: insights from MRI

**Symposium I "Reorganization of cortical networks in Multiple Sclerosis"** Chair: Frauke Zipp

15:00– 15:20

Bernhard Baier  
*Department of Neurology, Mainz*  
Reorganization of cortical networks in Multiple Sclerosis

15:20 – 15:40

Mathias Wahl  
*Department of Neurology, Frankfurt*  
Interhemispheric disconnection of the motor system in early relapsing remitting multiple sclerosis (RRMS)

15:40 – 16:00

Enzo Tagliazucchi  
*Department of Neurology, Frankfurt*  
Graph theoretical analysis of topological functional organization during resting state in multiple sclerosis (an fMRI study)

16:00 – 16:15

Nina Bauer  
*Winner of poster prize FTN/IAK Symposium 2011*  
*Institute for Physiology & Pathophysiology, Mainz*  
Myelin Basic Protein synthesis is regulated by small non-coding RNA715

16:15 – 16:40

Coffee break

**Symposium II "Network disregulation in schizophrenia"** Chair: Jochen Roeper

16:40 – 17:00

Torfi Sigurdsson  
*Institute of Neurophysiology, Frankfurt*  
Network dysfunction in genetic mouse models of schizophrenia

17:00 – 17:20

Peter Uhlhaas  
*MPI for Brain Research, Frankfurt*  
NMDA-hypofunctioning and Neural Synchron Deficits in Schizophrenia

17:20 – 17:40

Jochen Roeper  
*Institute of Neurophysiology, Frankfurt*  
Subtype-selective dysregulation of dopamine midbrain neuron in a striatal D2-overexpression mouse model of schizophrenia

17:40 – 18:00

Coffee break

18:00 – 18:45 **Lecture**

Gereon Fink  
*Department of Neurology, University Hospital Köln*  
Recovery of function after stroke: Is there any way to overcome the translational roadblock?

19:00 – open end

Cookout

## Thursday, June 21

07:30 – 09:00

Breakfast

09:00 – 09:45 **Lecture**

Ofer Yizhar  
*Department of Neurobiology, Weizmann Institute of Science, Israel*  
Optical control and recording of neural circuit dynamics

**Symposium III "Optogenetics in cognitive and systems neuroscience"** Chair: Pascal Fries

09:45 – 10:05

Ilka Diester  
*Ernst-Strüngmann-Institute, Frankfurt*  
Optogenetics in rodents and non human primates

10:05 – 10:25

Christian Schultheis  
*Institute of Biochemistry, Frankfurt*  
Unraveling the neuronal basis of behavior by optogenetics in *Caenorhabditis elegans*

**10:25 – 10:45**

Hartwig Spors  
*MPI of Biophysics, Frankfurt*  
Illuminating olfaction – searching for functional connectivity in vivo by replacing odors with light

**10:45 – 11:00**

Coffee break

#### **Symposium IV “New in the region”**

Chair: Robert Nitsch

**11:00 – 11:15**

Benedikt Berninger  
*Institute for Physiological Chemistry and FTN, Mainz*  
Voluntary or forced neurogenesis

**11:15 – 11:30**

Alf Giese  
*Clinic for Neurosurgery, Mainz*  
Resistance of malignant gliomas to surgical and oncological treatment

**11:30 – 11:45**

Raffael Kalisch  
*Neuro Imaging Center, FTN, Mainz*  
Fear not

**11:45 – 12:00**

Michael Siniatchkin  
*Clinic for Child and Adolescent Psychiatry, Frankfurt*  
Photosensitivity: from visual distress to epileptic seizures

**12:15 – 12:30**

Matthias Kaschube  
*Frankfurt Institute for Advanced Studies, Frankfurt*  
From cortical self-organization to visual perception

**12:30– 14:00**

Lunch break

**14:00 – 17:00 Posters and Coffee**

#### **Symposium V “Synchronizing neuronal networks”**

Chair: Heiko Luhmann

**17:00 – 17:20**

Pascal Fries  
*Ernst-Strüngmann-Institute, Frankfurt*  
Distinct frequency-defined brain networks subserve distinct functional roles

**17:20 – 17:40**

Albrecht Stroh  
*Institute for Microscopic Anatomy and Neurobiology, FTN, Mainz*  
Making waves: Initiation and propagation of slow oscillation-associated cortico-thalamic Ca<sup>2+</sup>waves in vivo

**17:40 – 18:00**

Heiko Luhmann  
*Institute for Physiology and Pathophysiology, Mainz*  
Synchronized activity in the somatosensory cortex of newborn rodents

**18:00 – 19:30**

Dinner

**19:30 – 20:15 Lecture**

Ulf Eysel  
*Department of Experimental Physiology, Bochum*  
The retinal lesion model of visual plasticity

**20:30 – open end**

Party

## **Friday, June 22**

**07:30 – 09:00**

Breakfast

**09:00 – 09:45 Lecture**

Andreas Engel  
*Department of Neurophysiology and Pathophysiology, Hamburg*  
Spectral fingerprints of large-scale communication in the brain

#### **Symposium VI “Towards circuits in Model Organisms”** Chair: Gerhard Technau

**09:45 – 10:05**

Carsten Duch  
*Institute for Zoology, Mainz*  
Calcium Channel Function in Drosophila Motoneurons

**10:05 – 10:25**

Sara Kuntz  
*Institute for Zoology, Mainz*  
Analysis of a Working Memory for Visual Orientation in Drosophila

**10:25 – 10:45**

Sina Tootoonian  
*MPI for Brain Research, Frankfurt*  
Full-rank ultra-sparse encoding of odors in the locust olfactory system

**10:45 – 11:00**

Coffee Break

#### **Symposium VII “Multimodal imaging and translational neuroscience”** Chair: Klaus Lieb

**11:00 – 11:20**

André Bastos  
*Ernst-Strüngmann-Institute Frankfurt*  
Bottom-up vs top-down interactions

**11:20 – 11:40**

Christian Fiebach  
*Department of Psychology, Frankfurt*  
Neural Bases of Individual Differences in Working Memory Capacity

**11:40 – 12:00**

Christian Kell  
*Department of Neurology, Frankfurt*  
Speech networks in health and disease

**12:00– 12:20**

Mathias Schreckenberger  
*Department of Nuclear Medicine, Mainz*  
PET Imaging in Neuropharmacology Research

**12:20 – 12:40**

Oliver Tüscher  
*Clinic for Psychiatry and Psychotherapy, Mainz*  
Neural systems of impulse control

**12:40 – 13:25 Lecture**

Andreas Meyer-Lindenberg  
*Central Institute of Mental Health, Mannheim*  
Brain mechanisms of risk for mental illness

**13:25**

Awarding of Poster Prizes, Concluding Remarks

**13:45 – 14:30**

Lunch

**14:30**

Departure