

# Rhine – Main Neuroscience Network

rmn<sup>2</sup>



1st meeting

November 24 – 26, 2010

Jugendherberge Oberwesel  
Auf dem Schönberg  
55430 Oberwesel

## Wednesday, November 24

**14:00**

**Introductory remarks**

**Jacky Trotter, Mainz**  
**Herbert Zimmermann, Frankfurt**  
**Robert Nitsch, Mainz**

**14:15 – 15:00**

**Klaus Unsicker (Chair: Thomas Deller, Frankfurt)**  
*Department of Molecular Embryology, University of Freiburg*  
GDF-15, a novel TGF- $\beta$  superfamily member, is crucial for the maintenance of postnatal motor and sensory neurons

**Symposium I (Chair: Hermann Rohrer, Frankfurt)**

**15:00 – 15:20**

Ana Rogulja-Ortmann  
*Institute for Genetics, Mainz*  
Regulation and impact of Hox RNA processing on regional diversification during Drosophila CNS development

**15:20 – 15:40**

Mirko Schmidt  
*Edinger Institute, Frankfurt*  
EGFL7 regulates adult neural stem cell maintenance and differentiation by inhibition of Notch1

**15:40 – 16:00**

Amparo Acker-Palmer  
*Institute for Cell Biology and Neuroscience, Frankfurt*  
EphrinB signaling during nervous system development and plasticity

**16:00 – 16:20**

Johannes Vogt  
*Institute for Microanatomy and Neurobiology, Mainz*  
Phospholipid signaling at the glutamatergic synapse: Does early neuronal activity influence neuronal connectivity?

**16:20 – 16:40**

Break

**Symposium 2 (Chair: Beat Lutz, Mainz)**

**16:40 – 17:00**

Volker Siffrin

*Neurological Clinic, Mainz*

In vivo imaging of partially reversible TH17-induced neuronal dysfunction in the course of encephalomyelitis

**17:00 – 17:20**

Werner Kilb

*Institute for Physiology and Pathophysiology, Mainz*  
Depolarizing GABA responses during early development: Excitatory or inhibitory?

**17:20 – 17:40**

Andreas Vlachos

*Institute for Clinical Neuroanatomy, Frankfurt*  
Developmental stabilization and activity-dependent regulation of gephyrin scaffolds at hippocampal gabaergic synapses

**17:40 – 18:00**

Constantin Gonsior

*Molecular Cell Biology, Mainz*

Post-transcriptional regulation of myelin basic protein expression

**18:00 – 18:45**

**Reinhard Jahn (Chair: Helmuth Steinmetz, Frankfurt)**  
*Department of Neurobiology, MPI for Biophysical Chemistry*  
Molecular steps in the exocytosis of synaptic vesicles  
Dinner

**18:45-00:00**

Cookout

## Thursday, November 25

**07:30 – 08:45**

Breakfast

**08:45 – 9:00**

**Georg Krausch**, President of the Johannes Gutenberg University Mainz  
Salutatory Address

**Werner Müller-Esterl**, President of the Goethe University Frankfurt  
Salutatory Address

**09:00 – 9:45**

**Christian Büchel (Chair: Ulf Ziemann, Frankfurt)**  
*Department of Systems Neuroscience, University Medical Center Hamburg-Eppendorf*  
Brain Imaging as a Neurophysiology Toolkit in Humans

### Symposium 3 (Chair: Christian Behl, Mainz)

9:45 – 10:05

Julia Leschik  
*Institute for Physiological Chemistry and Pathobiochemistry, Mainz*  
Functions of the cannabinoid receptor 1 (CB1) in adult neurogenesis

10:05 – 10:25

Manuela Nowotny  
*Institute for Cell Biology and Neuroscience, Frankfurt*  
Mechano-electrical Transduction in Hearing Organs

10:25 – 10:45

Kerstin Nagel-Wolfrum  
*Cell and Matrix Biology, Institute for Zoology, Mainz*  
Gene-based therapy options for Usher syndrome type 1C

10:45 – 11:00

Coffee break

### Symposium 4 (Chair: Irmgard Tegeder, Frankfurt)

11:00 – 11:20

Morna Gruber  
*Neurobiology, Institute for Zoology, Mainz*  
Electrophysiological characterization of neurons in the tectum opticum of *Carassius auratus* with respect to "color" and "motion"

11:20 – 11:40

Alexander Gottschalk  
*Institute for Biochemistry, Frankfurt*  
Optogenetic analysis of synaptic transmission and neuronal networks in *Caenorhabditis elegans*

11:40 – 12:00

Hartwig Spors  
*Max Planck Institute for Biophysics, Frankfurt*  
Testing Olfactory Processing

12:00 – 14:00

Lunch

14:00 – 14:45

### Giles Laurent (Chair: Heiko Luhmann, Mainz)

*Max Planck Institute for Biophysics, Frankfurt*  
Adaptive gain control in an olfactory environment

14:45 – 18:30

Poster Session

18:30 – 19:30

Dinner

19:30 – 20:15

### Angela Giangrande (Chair: Gerd Technau, Mainz)

*Department of Cell Biology and Development, IGBMC Strasbourg*  
Differentiation and Reprogramming of Neural Stem Cells in *Drosophila*

20:30 – 00:00

Party

## Friday, November 26

07:30 – 08:45

Breakfast

09:00 – 09:45

### Trevor Smart (Chair: Jochen Kaiser, Frankfurt)

*Department of Neuroscience, Physiology and Pharmacology, University College London*  
Plasticity of Synaptic and Extrasynaptic Inhibitory Transmission

### Symposium 5 (Chair: Jochen Triesch, Frankfurt)

09:45 – 10:05

Pascal Fries  
*Ernst Strüngmann Institute, Frankfurt*  
Electrophysiological imaging of the attention network

10:05 – 10:25

Michael Wibrall  
*Brain Imaging Center, Frankfurt*  
Neuronal Correlates of Perceptual Closure processing - an investigation with time-resolved MEG-Beamforming and Transfer Entropy

10:25 – 10:45

Jörg Lücke  
*FIAS, Frankfurt*

What are the Functional Goals of Learning and Sensory Encoding in the Cortex? - Lessons from Simple Cell Responses in V1

10:45 – 11:00

Break

### Symposium 6 (Chair: Matthias Schreckenberger, Mainz)

11:00 – 11:20

Andreas Kern  
*Institute for Pathobiochemistry, Mainz*  
Adaptation of neuronal proteostasis during aging

11:20 – 11:40

Andreas Fellgiebel  
*Department of Psychiatry and Psychotherapy, Mainz*  
Translational neuroscience approaches based on cognitive phenotypes in neuropsychiatric syndromes

11:40 – 12:00

Helmut Laufs  
*Clinic for Neurology, Frankfurt*  
Multimodal imaging of brain states

12:00 – 12:45

### Marius Ueffing (Chair: Uwe Wolfrum, Mainz)

*Department of Protein Science, Helmholtz Zentrum München*  
Targeting Protein Networks in Neurosensory Disease: Functional Proteomic Approaches to Analyse Molecular Defects on a Systems Level

12:45

### Wolf Singer, Frankfurt

Max Planck Institute for Brain Research, Frankfurt  
Perspectives in the Neurosciences and awarding of poster prizes

13:00 – 14:00

Lunch

14:00

Departure