

The significance of neuroglia for the formation, function and plasticity of synapses

First Meeting of the DFG - Priority Program (SPP 1172)

October 14-16 2004 at the TU Kaiserslautern, Building 57 (Rotunde)

Thursday, October 14, 2004

15:00 Welcome addresses

15:30 *R. Robitaille, Montréal*

Glial cells as active partners in synaptic transmission and plasticity

16:15 *Coffee break*

16:45 *H. Betz, Frankfurt*

Regulation of glycine dependent neurotransmission by the glial glycine transporter 1 (GlyT1)

17:15 *C. Rose, München*

Quantitative two-photon Na⁺ imaging of glutamate uptake and glutamate receptor activation in Bergmann glial cells

17:45 *S. Hülsmann, Göttingen*

Modulation of synaptic transmission by a novel activity-dependent regulatory mechanism of astrocytic gap junction coupling

18:15 *A. Reichenbach, A. Bringmann Leipzig*

Role of Müller glial cells in synaptic functioning of the mammalian retina

19:30 *Dinner at the "Betze"*

Friday, October 15, 2004

- 08:45 *B. Haas, H. Kettenmann, Berlin*
Neuron-glia interaction at a giant mammalian synapse, the calyx of Held
- 09:15 *C. Steinhäuser, G. Seifert, Bonn*
Modulation of signal transmission in the hippocampus by GluR-type astroglial cells
- 09:45 *P. Illes, K. Wirkner, Leipzig*
Communication between cortical neurons and astrocytes by extracellular ATP and glutamate
- 10:15 *J.W. Deitmer, Kaiserslautern*
Glial modulation of synaptic input to cerebellar Purkinje neurons
- 10:45 *Coffee break*
- 11:15 *R. Klein, O. Griesbeck, München-Martinsried*
Investigations on the ephrinA/EphA signalling system at the neuroglial interface - focus on synaptic morphology, plasticity and Ca²⁺ signalling
- 11:45 *F. Kirchhoff, Göttingen*
Analysis of single signaling molecules at the synaptic astroglia-neuron interface
- 12:15 *F. Pfrieder, Strasbourg*
Establishment of new transgenic mouse models to study astrocyte function *in vivo*
- 13:00 *Lunch at the Sommerhaus*
(next to the campus)

- 14:00 *C. Giaume, Paris*
Role of astrocyte gap junctions for neuronal activity and survival
- 14:30 *J. Trotter, Mainz*
The role of the proteoglycan NG2 in glial-neuronal signalling and synapse formation
- 15:00 *C. Seidenbecher, E. Gundelfinger, Magdeburg*
Role of the extracellular proteoglycans brevican and neurocan in synaptic plasticity
- 15:30 *Coffee break*
- 16:00 *M. Schachner, Hamburg*
Influence of the constitutive, conditional and inducible astroglia-derived tenascin-C ablation on synaptic function in the hippocampus
- 16:30 *A. Faissner, H. Hatt, Bochum*
Regulation of synapse formation, plasticity and function by astroglial-derived extracellular matrix - tenascin-C and interacting proteoglycan ligands
- 17:00 *B. Berninger, M. Götz, Neuherberg bei München*
Astroglial heterogeneity: origin and implications for (adult) neurogenesis and synaptogenesis
- 17:30 General discussion
- Dinner*

Saturday, October 16, 2004

Discussion groups, *excursion or home run*