## DFG-Priority Programme 1176 – Final Symposium in Kaiserslautern Germany

# THE ROLE OF NEUROGLIA FOR THE FORMATION,

## FUNCTION AND PLASTICITY OF SYNAPSES

at the Fraunhofer-Centre, 26. – 29. August 2010

#### THURSDAY, 26. AUGUST 2010

14.30	Welcome, Coffee & Tea
14.45	Welcome addresses

#### Session 1: System, Structure & Organization

15.00	Philip Haydon, Boston, MA  The astrocyte as a modulator of sleep and its impact on synaptic function in health and disease
15.30	Frank Pfrieger, Strasbourg Synapse-Glia Interactions: Models Matter!
16.00	Coffee & Tea
16.30	Andreas Faissner, Bochum  Regulation or perineuronal nets (PNNs), synaptogenesis and synaptic plasticity by glial-derived extracellular matrix
17.00	Renato Frischknecht, Magdeburg From juvenile to adult plasticity: a role for the brain's extracellular matrix
17.30	Daniela Dietrich, Magdeburg Characterization of astroglial proteome dynamics using cell-specific proteomic profiling
18.00	Benedikt Berninger, München Directing astroglia from the cerebral cortex into subtype specific functional neurons
19.00	Welcome Buffet at Fraunhofer Centre

## FRIDAY, 27. AUGUST 2010

09.00	Swen Hülsmann, Göttingen Astrocytes in the respiratory network, anything special about them?
09.30	Andreas Reichenbach, Leipzig Interactions of Müller glial cells with retinal synapses
10.00	Helmut Kettenmann, Berlin Neuron-astrocyte interactions in the barrel cortex
10.30	Coffee & Tea

#### Session 2: Release of transmitters

11.00	Nils Brose, Göttingen Regulation of neurotransmitter release: speed and accuracy matter
11.30	Yoshinori Moriyama, Okayama, Japan The role of vesicular nucleotide transporter in neuron/glia interaction
12.00	Robert Zorec, Ljubljana, Slowenia Properties of regulated exocytosis and vesicle traffic in astrocytes
12.30	Martin Oheim, Paris Do they or don't they? Imaging gliotransmitter release
13.00	Lunch at the bistro (in FHZ)
14.00	Excursion, Evening free to explore the city of Kaiserslautern

## SATURDAY, 28. AUGUST 2010

## Session 2: Release of transmitters (continued)

09.00	Vladimir Parpura, Birmingham, AL  Exocytotic release of glutamate from astrocytes
09.30	Christian Lohr, Hamburg Role of extrasynaptic transmitter release in neuron-glia communication and neurovascular coupling
10.00	Eliana Scemes, New York Pannexin-mediated ATP release from astrocytes
10.30	Coffee & Tea

## Session 3: Synaptic transmission and plasticity

11.00	Schuichi Koizumi, Yamanashi, Japan Gliotransmitter release and regulation of synaptic transmission by astrocytes
11.30	Shumin Duan, Shanghai, China Glial cells and synaptic plasticity
12.00	Alexej Verkhratsky, Manchester, GB Purinergic transmission in neuronal-glial networks
12.30	Nathalie Rouach, Paris Astroglial connexin30 controls synaptic strength
13.00	Photo shooting in front of FHZ
13.15	Lunch (Snacks)
14.00	Mitchel Chesler, New York  Regulation and modulation of extracellular pH and its impact on excitatory synaptic transmission
14.30	Christine Rose, Düsseldorf Synaptically-induced sodium transients in glial cells
15.00	Elena B. Pasquale, La Jolla, CA Neuron-glia communication through EphA4 and ephrin-A3
15.30	Sonia Paixão, München-Martinsried Neuroglia interaction via Eph/ephrins modulates synaptic plasticity
16.00	Coffee & Tea

## Session 4: Metabolism & Signaling

16.30	Arne Schousboe, Kopenhagen, Denmark Glycogen, glucose and lactate as energy substrates at the synapse
17.00	Johannes Hirrlinger, Leipzig The redox state of astrocytes: regulation and functional implications
17.30	Joachim Deitmer, Kaiserslautern Glucose uptake and distribution in the mouse brain
18.00	Felipe Barros, Valdivia, Chile Second-to-second modulation of local energy metabolism in response to synaptic activity
19.30	Symposium Banquet at Restaurant "Das Brauhaus an der Gartenschau"

#### SUNDAY, 29. AUGUST 2010

09.30	Frank Kirchhoff, Homburg  AMPA receptors in Bergmann glia and their impact for cerebellar function
10.00	Christian Steinhäuser, Bonn Hippocampal NG2 cells display multiple calcium-signaling pathways and highly motile processes
10.30	Coffee & Tea
11.00	Martin Theis, Bonn Expression and function of CPEB translational regulators in astrocytes and NG2 glia
11.30	Sergej Kirischuk, Mainz Glutamate and GABA transporters replace glutamate for GABA in neonatal cerebral cortex
12.00	Volker Eulenburg, Erlangen Glial GlyT1 function is essential for early postnatal life but dispensable in adult mice
12.30	General Discussion
13.00	End of Symposium & Farewell (Lunch Package)