


Annual meeting
DFG Priority Programme

glial
heterogeneity 
SPP1757

young Glia

**Functional Specialisations of Neuroglia
as Critical Determinants of Brain Activity
and
Japanese-German YoungGlia
collaborative meeting
for mutual research exchange**

Speyer | Sept 30 - Oct 5, 2018



Scientific programme



Venue: **Technik Museum Speyer**

Am Technik Museum 1

D-67346 Speyer

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Mercedes Salon

<https://speyer.technik-museum.de>



Sunday, September 30, 2018

	Arrival
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Monday, October 1, 2018

9:00 – 12:00	Registration, introduction and open discussions
12:00 – 13:00	Lunch
13:00 – 13:15	Hiroaki Wake / Christine R. Rose / Frank Kirchhoff Opening remarks
13:15 – 15:00	Project presentations I
	Yoshihumi Abe, Kenji Tanaka <i>Keio University, Japan</i> A novel approach to visualize optogenetics-induced structural changes of myelinated axons using MRI
	Hironu Monai, Hajime Hirase <i>RIKEN Institute, Wako</i> Macroscopic neuroglial imaging of pathological states using a G-CaMP Tg mouse
	Tomoyuki Furuyashiki <i>Kobe University</i> Roles of neuroinflammation in stress-related behaviors

	<p>Ko Matsui <i>Tohoku University, Sendai</i> Glial control of neuronal information processing</p>
15:00 – 15:15	Coffee break
15:15 – 16:30	Project presentations II
	<p>Jan Meyer, Christine Rose <i>University of Düsseldorf</i> Ionic excitability of astroglia beyond (and towards) calcium in health and disease</p>
	<p>Julia Schneider, Ruth Beckervordersandforth <i>University of Erlangen-Nürnberg</i> Adult gliogenesis and functional astrocyte heterogeneity</p>
	<p>Gebhard Stopper, Laura Caudal, Frank Kirchhoff <i>CIPMM, University of Saarland, Homburg</i> Glial transmitter receptors in brain function</p>
	<p>Amit Agarwal <i>ZMBH Heidelberg</i> Ca²⁺ signals in mitochondria of astrocytes</p>
	<p>Ronald Jabs <i>University of Bonn</i> Release of exosomes from NG2 glia</p>
16:30 – 16:15	Coffee break

16:15 – 18:00	Project presentations III
	<p>Hiroaki Wake <i>Kobe University</i> Visualization and manipulation of glial cell functions <i>in vivo</i></p>
	<p>Ryuta Koyama <i>Tokyo University</i> Modulating glial function in health and disease using PAC (Photoactivated Adenylyl Cyclase)</p>
	<p>Schuichi Koizumi <i>University of Yamanashi</i> Bidirectional synapse remodeling by reactive astrocytes</p>
	<p>Kunimichi Suzuki <i>Keio University</i> Synapse organization and modulation via glia-neuron interaction</p>
18:00 – 19:00	Dinner
19:00 – 22:00	Proposal discussions

Tuesday, October 2, 2018

9:00 – 9:45	Richard Robitaille <i>University of Montreal</i> A glial life journey: glial regulation of synapses during maturation and in aging
9:45 – 10:00	Richard Robitaille <i>University of Montreal</i> Canadian research programmes
10:00 – 10:30	Coffee break
10:30 – 12:00	Poster presentations
12:00 – 13:00	Lunch
13:00 – 13:45	Ruth Beckervordersandforth <i>University of Erlangen</i> Mitochondrial dysfunction in radial glia
13:45 – 17:00	Proposal preparations I
18:00 – 19:00	Dinner

Wednesday, October 3, 2018

9:00 – 10:30	Proposal presentations
10:30 – 10:45	Coffee break
10:45 – 11:30	Proposal evaluation and selection
11:30 – 12:00	Awarding ceremony
12:00 – 13:00	Lunch

Poster YoungGlia

- 1 Mitsuharu Endo, Yuki Tanaka, Mako Otsuka, Yasuhiro Minami: The role of Ror2 tyrosine kinase in neural stem/progenitor cells and reactive astrocytes
- 2 Yoshifumi Abe: A novel approach to visualize optogenetics-induced structural changes of myelinated axons: A Opto-DTI study
- 3 Alejandra Pazo: Molecular characterization of NMDA receptors in hippocampal CA1 astrocytes
- 4 Mariko Onodera, Ko Matsui: Neural and glial basis of hyperexcitable circuits
- 5 Toshimitsu Hiragi, Cong Luo, Yuji Ikegaya, Ryuta Koyama: Microglia strip inhibitory synapses in auditory pathway after seizures
- 6 Kunimichi Suzuki: Synapse assemblies by C1q and engineered C1q family protein
- 7 Riho Ono, Shota Sugio, Hiroaki Wake: Ca²⁺ imaging of oligodendrocyte and OPC *in vivo*
- 8 Julia Schneider, Ruth Beckervordersandforth: Adult gliogenesis and functional astrocyte heterogeneity
- 9 Gebhard Stopper, Frank Kirchhoff: Automatic extraction and analysis of Ca²⁺-signals in mice
- 10 Laura Caudal, Frank Kirchhoff: Contribution of glial transmitter receptors to pathological network function in mouse models of epilepsy
- 11 Fedorov D, Walter J, van Strien M, Hol E M, Steinhäuser C, Glebov R, Jabs R: Gray matter NG2 cells release exosomes that contain non-alpha GFAP isoforms and NG2
- 12 Petr Unichenko, Christian Henneberger: Optical sensors for monitoring gliotransmitters release
- 13 Jan Meyer, Verena Untiet, Christoph Fahlke, Thomas Gensch, Christine R Rose: Quantitative detection of intracellular sodium using FLIM with CoroNa Green



Scientific programme

Wednesday, October 3, 2018

11:00 – 12:00	Registration
12:00 – 13:00	Lunch
13:00 – 13:15	Opening Remarks <i>Christine Rose / Frank Kirchhoff</i>
13:15 – 14:00	Hajime Hirase <i>RIKEN, Wako</i> Imaging of neural activity during transcranial direct current stimulation
14:00 – 15:00	Blitz presentations I
	Aline Timmermann Deletion of Kir4.1 in NG2 glia disturbs neuronal plasticity and behavior
	Julia Schneider Adult gliogenesis and functional astrocyte heterogeneity in the mouse hippocampus
	Yvonne Schwarz v-SNARE proteins and Ca ²⁺ -sensors in astrocytic function and heterogeneity
	Susanne Köhler The NADH/NAD ⁺ redox state in astrocytes: Central integrating node between metabolism and signaling

15:30 – 16:00

Coffee break

16:00 – 16.45

Richard Robitaille

University of Montreal

Regulation of synaptic function by glial cells in health and disease

17:00 – 19:00

Guided tour through the museum collection

19:00 – 20:00

Dinner

20:00 – 22:00

Open discussions in small groups

Thursday, October 4, 2016

9:00 – 9:45

Amit Agarwal

ZMBH, Heidelberg

The role of AMPA receptors in oligodendroglial precursor cells

9:45 – 10:45

Blitz presentations II

Camille Philippot

Astrocytes and oligodendrocytes in the thalamus jointly maintain synaptic activity by supplying metabolites

Sven Aschenbroich

Heterogeneity in ependymogial response to injury

Kerstin Miebach

In vivo analysis of glia to neuron exosome transfer

Ewa Bres

Deletion of Lrp1 from cortical radial glia results in neurological deficits and severe seizures

10:45 – 11:15	Coffee break
11:15 – 12:00	Helmut Kettenmann <i>Cellular Neurosciences, Max Delbrück Center of Molecular Medicine</i> The panglial network and axonal support
12:00 – 13:00	Lunch
13:00 – 13:45	Hauke B. Werner <i>MPI Experimental medicine Göttingen</i> Axonal ensheathment in the nervous system of lamprey: implications for the evolution of myelinating glia
13:45 – 14:45	Blitz presentations III
	Tobias Buscham CMTM5 – a novel myelin protein involved in preserving axonal integrity
	Laura Stopper Complexity of Ca ²⁺ signals in astrocytes – Contribution of astroglial GABAB receptors
	Daniel Ziemens Regional heterogeneity in astrocyte sodium signalling: Mechanisms and consequences of sodium signals in neocortical astrocytes
14:45 – 15:15	Coffee break
15:15 – 18:30	Time for collaborative interactions
19:00 – 20:00	Dinner
20:00 – 22:00	Open discussions in small groups

Friday, October 5, 2016

9:00 – 9:45	Schuichi Koizumi <i>University of Yamanashi</i> Bidirectional synapse remodeling by reactive astrocytes
9:45 – 10:15	Blitz presentations of Young Glia awardees Binational collaborative projects
10:15 – 10:45	Coffee break
10:45 – 11:30	Christian Henneberger <i>University of Bonn</i> Spatiotemporal control of hippocampal NMDA receptors by co-agonist supply
11:30 – 12:15	Discussion of common activities for 2019
12:15 – 12:30	Christine R. Rose / Frank Kirchhoff <i>Concluding remarks</i>
12:30 – 13:30	Lunch and departure



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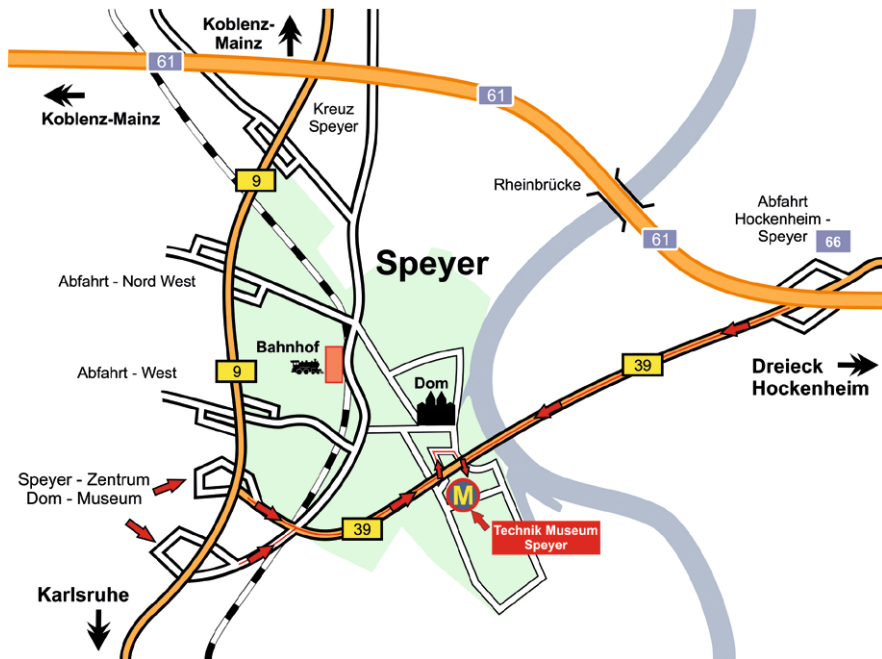
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Direction to Technik-Museum Speyer



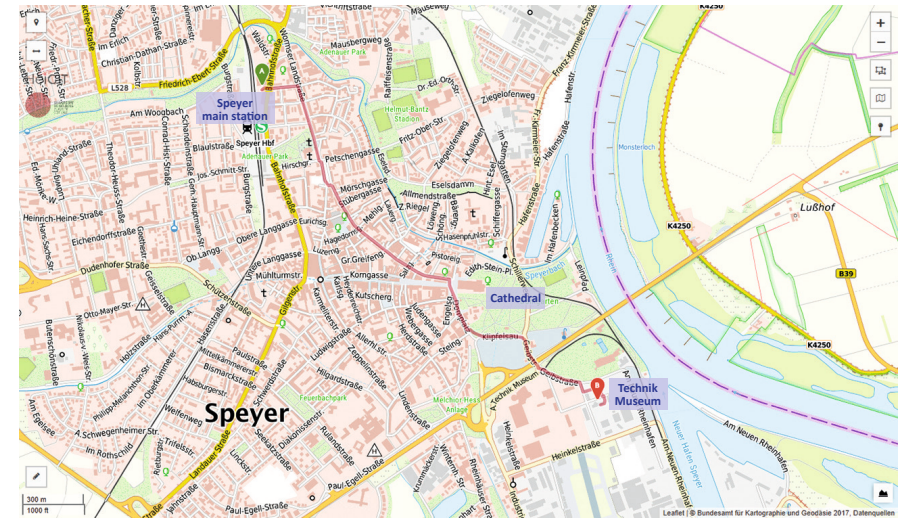
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Speyer Train Station to Technik-Museum



Location Technik-Museum



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