



XI European Meeting
on Glial Cells in Health and Disease
Estrel Hotel Berlin
July 3–6, 2013

Meeting Program

www.gliameeting.eu

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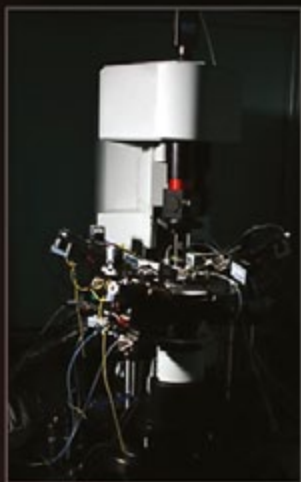
- Assay development through screening
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Meeting Program

XI European Meeting
on Glial Cells in Health and Disease
Estrel Hotel Berlin
July 3–6, 2013

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Acknowledgements

The Network Glia e. V. and the organizers of the XI European Meeting on Glial Cells in Health and Disease gratefully acknowledge the collaboration and the financial support of the following partners (in alphabetic order):



Center for Stroke Research Berlin



Deutsche Forschungsgemeinschaft (DFG)



Max Delbrück Center for Molecular Medicine Berlin-Buch



NeuroCure
Exzellenzcluster



SFB 665: Developmental Disturbances in the Nervous System



SFB TRR 43: The Brain as a Target of Inflammatory Processes



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Committees

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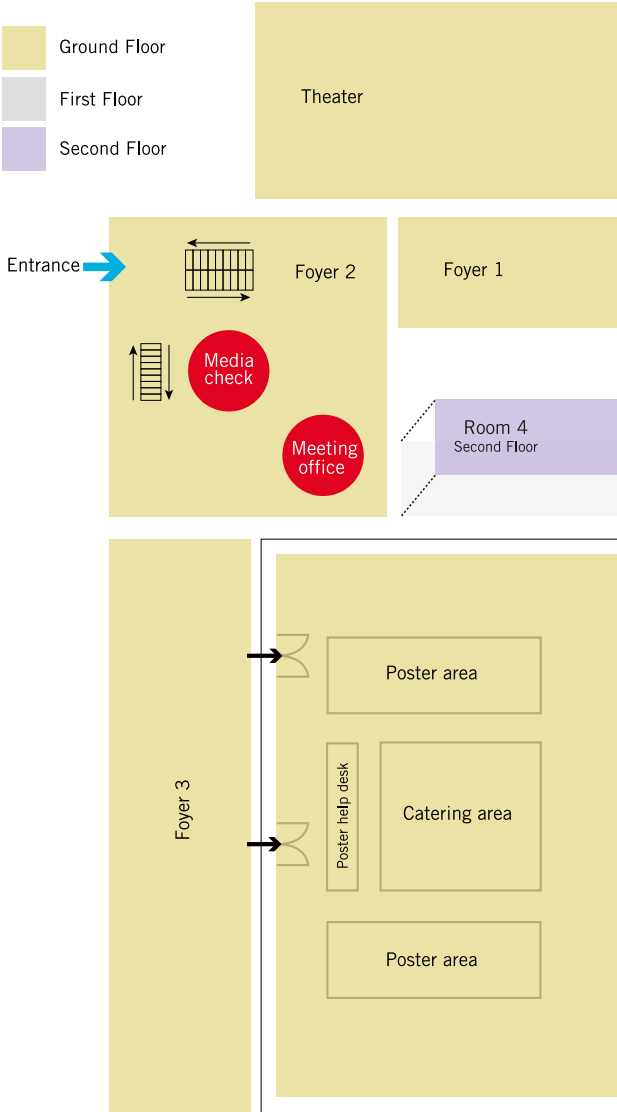
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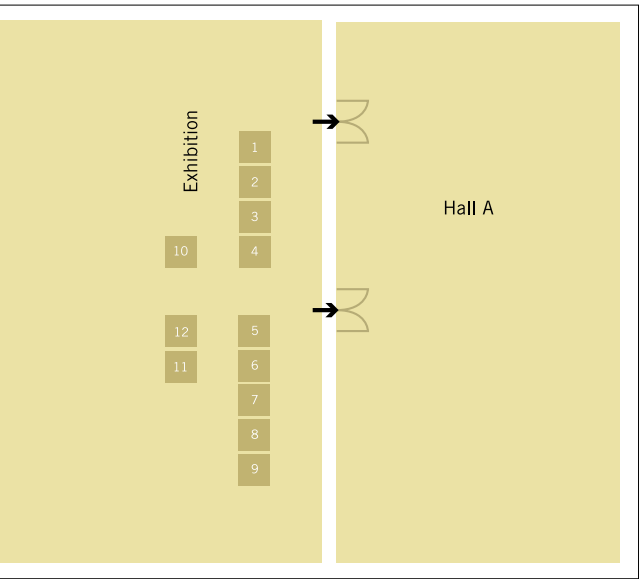
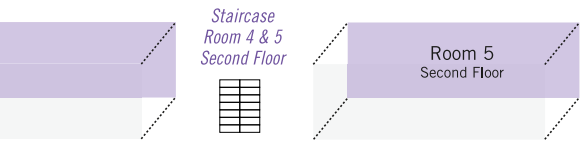
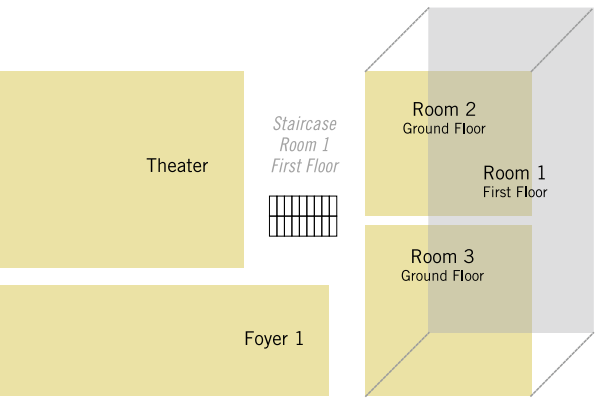
www.wiley.com

Floor plan

- Ground Floor
- First Floor
- Second Floor



Floor plan



Surrounding map



1 Melina's Coffee Bar
Sonnenallee 293,
12057 Berlin

2 Bakery & Confectionary Thürmann
Grenzallee 4-6, 12057 Berlin

3 McDonald's Restaurant Berlin
Sonnenallee 254, 12057
Berlin

4 Restaurant Kathy's
Karl-Marx-Str. 266,
12057 Berlin

5 Coffee Bar & Restaurant Louis
Richardplatz 5, 12055 Berlin

6 Restaurant Shaan
Richardplatz 20,
12055 Berlin

7 Coffee Bar Geschwister Nothoft
Schwarzastraße 9, 12055
Berlin

8 Marin – Fish + Meat Turkish Restaurant
Ziegrastraße 1, 12057 Berlin

9 Coffee Bar Rix
im Saalbau Neukölln
Karl-Marx-Str. 141, 12043
Berlin

10 Trattoria La Terrazza
Steinbockstr. 20
12057 Berlin

1 Der kleine Buddha (Organic grocery store) Mareschstraße 14,
12055 Berlin

2 Supermarket
Sonnenallee 215,
12057 Berlin

3 Supermarket
Sonnenallee 192,
12059 Berlin

4 Supermarket
Braunschweiger Straße
21, 12057 Berlin

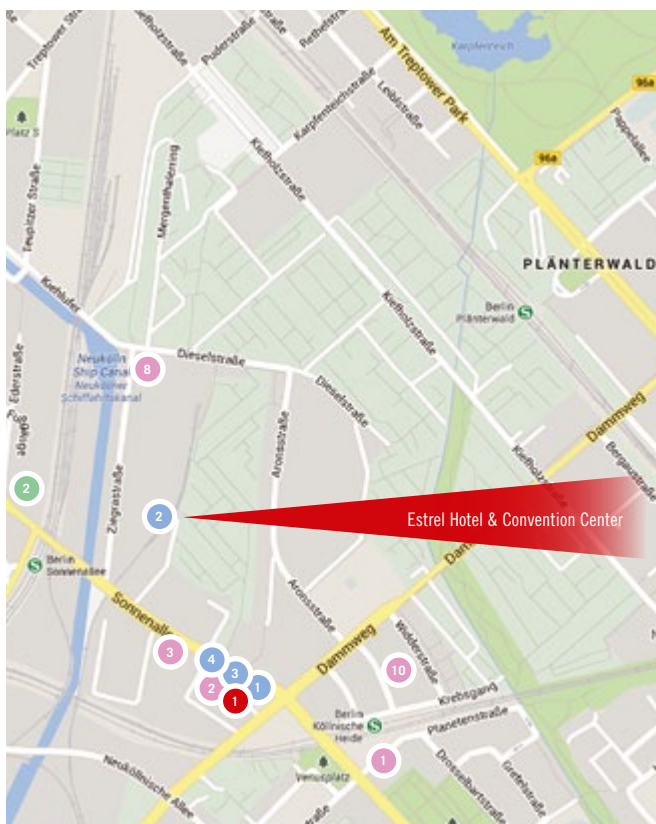
1 Post office
Neukölln Carree
Grenzallee 4-6, Ecke
Sonnenallee, 12057 Berlin

2 ATM Berliner Volksbank
Sonnenallee 225, 12057
Berlin (inside the Estrel Hotel)

3 ATM ING-DiBa
Grenzallee 4-6, 12057 Berlin

4 ATM Berliner Sparkasse
Grenzallee 4-6, 12057 Berlin

1 Pharmacy
Neukölln Carree
Grenzallee 4-6, Ecke
Sonnenallee, 12057 Berlin



General information

IN ALPHABETIC ORDER

CREDIT POINTS FOR

MEDICAL DOCTORS PRACTICING IN GERMANY

Tuesday, July 2, 2013: Introductory Course 8 points (Category A)

Wednesday, July 3, 2013: Glia Meeting 6 points (Category B)

Thursday, July 4, 2013: Glia Meeting 6 points (Category B)

Friday, July 5, 2013: Glia Meeting 6 points (Category B)

Saturday, July 6, 2013: Glia Meeting 6 points (Category B)

ELECTRICITY SUPPLY

220 V – 50 Hz AC

EXHIBITION

Exhibition opening times:

Wednesday, July 3, 2013 14:00 – 20:00

Thursday, July 4, 2013 10:00 – 18:30

Friday, July 5, 2013 10:00 – 18:30

Saturday, July 6, 2013 10:00 – 15:00

INSURANCE

The organizers do not take responsibility for individual medical, travel or personal insurance. Participants are advised to carry out their own insurance policies.

INTERNET ACCESS

Wireless internet access is available free of charge. Kindly note: As extensive use of wireless usually slows down the internet connection drastically a good quality connection cannot be guaranteed.

Login: glia2013

Password: glia2013

MEDIA CHECK/ SPEAKERS' SERVICE

The media check for oral presentations is located near to the meeting office (see floor plan on page 8+9). We kindly ask you to hand in your presentation on a memory stick/CD ROM about 2 hours in advance of your talk, at the latest, or the day before.

MEETING OFFICE

Opening times:

Wednesday, July 3, 2013 07:30 to 21:00

Thursday, July 4, 2013 08:00 to 19:00

Friday, July 5, 2013 08:00 to 19:00

Saturday, July 6, 2013 08:00 to 15:00

Phone: +49 (0)176 70921007

E-Mail: glia2013@kit-group.org

ORGANIZATION

Network Glia e. V.

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Robert-Rössle-Straße 10, 13125 Berlin, Germany

E-mail: gibson@mdc-berlin.de

www.networkglia.eu



K.I.T. Group GmbH

Münzgasse 2, 01067 Dresden, Germany

E-mail: info@kitdresden.de

www.kit-group.org



POSTER SESSIONS

Each poster will hang for two days: Posters with poster number ending with an A will hang on Wednesday and Thursday, posters with poster numbers ending with a B will hang on Friday and Saturday.

The presenting author of each poster is requested to be present at her/his poster during the poster session. The poster sessions are divided into even and uneven serial numbers. Each poster is presented in two sessions of 60 min.

Posters with numbers ending of an A:

(Hanging of posters: Wednesday, July 3, before 17:00)

Wednesday, July 3, 2013	17:15 – 18:15 and
Thursday, July 4,	13:15 – 14:15
Uneven serial numbers (e.g. T03-03A)	

Wednesday, July 3, 2013,	18:15 – 19:15 and
Thursday, July 4,	14:15 – 15:15
Even serial numbers (e.g. T03-04A)	

All posters must be removed on Thursday, directly after the poster session.

Posters with numbers ending of a B:

(Hanging of posters: Friday, July 5, before 13:00)

Friday, July 5, 2013,	13:15 – 14:15 and
Saturday, July 6,	13:00 – 14:00
Uneven serial numbers (e.g. T03-03B)	

Friday, July 5, 2013,	14:15 – 15:15 and
Saturday, July 6,	14:00 – 15:00
Even serial numbers (e.g. T03-04B)	

The size of a poster is DIN A0 landscape format
(85 cm height, 119 cm width).

Power strips to hang your poster are available at the poster help desk.

PUBLIC TRANSPORTATION AND TRAVEL

From Berlin Tegel Airport TXL:

Take the X9 bus line from the airport to the “Jungfernheide” bus stop. Transfer then to the S42 S-Bahn commuter train line (Ringbahn) until you reach the “Sonnenallee” stop.

Public transport journey duration: roughly 40 minutes

Taxi journey duration: roughly 30 minutes

Taxi price: roughly € 35

From Berlin Schönefeld Airport SXF:

Take the 171 bus line until you reach the “Sonnenallee” stop.

Public transport journey duration: roughly 40 minutes

Taxi journey duration: roughly 15 minutes

Taxi price: roughly € 25

From Berlin Central Train Station (Hauptbahnhof):

Take the M41 bus line until you reach the “Ziegrastraße” stop.

Public transport journey duration: roughly 40 minutes

Taxi journey duration: roughly 18 minutes

Taxi price: roughly € 20

From Südkreuz Station:

Take the S42 S-Bahn commuter train line (Ringbahn) until you reach the “Sonnenallee” stop.

Public transport journey duration: roughly 10 minutes

Taxi journey duration: roughly 10 minutes

Taxi price: roughly € 18

From Ostbahnhof Station:

Take either one of the S5, S75 or S9 S-Bahn commuter train lines until you reach the “Ostkreuz” station. Then transfer to the S41 S-Bahn line (Ringbahn) and continue until you reach the “Sonnenallee” stop.

Public transport journey duration: roughly 15 minutes

Taxi journey duration: roughly 12 minutes

Taxi price: roughly € 16

From the Park Hotel Blub:

Take the bus 171 at bus stop “Franz-Körner-Straße”, direction “U Hermann-platz” (bus stop is about 150 m from the Park Hotel Blub). Go out at the “Sonnenallee” stop. Then you have to walk about 250 m to the Estrel Hotel.

Public transport tickets:

To reach the Estrel using Berlin's public transport facilities, you will require a single journey ticket for the AB zone costing € 2.40 (Exception: Please note that when travelling from the Berlin-Schönefeld Airport SXF, you will require an ABC zone ticket costing € 3.10). You can purchase tickets at the BVG service counters, the BVG ticket vending machines located in the S-Bahn and U-Bahn stations or on busses directly from the driver (please have change ready for bus drivers).

REGISTRATION

On-site registration will be available on all conference days, registration fees can be paid in cash or by VISA, Mastercard or American Express.

Full registration (all days):

Scientists:	€ 550
Students:	€ 350
Commercials:	€ 595
Introductory Course on Glial Biology:	€ 30.00 / € 65.00*

* On-site payment for the Introductory Course is only accepted in cash.

Registration per day:

Scientists:	€ 170
Students:	€ 120
Commercials:	€ 230

Students must show their valid student identity card!

Registration fee includes

Admission to all sessions, poster area and exhibition

Lunch on July 4 to 6

Admission to the welcome reception

Conference bag including abstract book, final program, city map

TAXI

There are several Taxi cooperations in Berlin. One of the biggest is Taxi Funk Berlin, Tel. +49 30 44 33 22.

VENUE

Estrel Hotel & Convention Center

Sonnenallee 225, 12057 Berlin

www.estrel.com

VENUE INTRODUCTORY COURSE

Max Delbrück Center for Molecular Medicine (MDC)

Robert-Rössle-Str. 10, 13125 Berlin-Buch

Max-Delbrück Communications Center, Hall Axon (2. Floor)

Scientific program

TUESDAY, JULY 2, 2013

9:30–17:45 **Introductory Course** (taking place in the Max Delbrück Communications Center (MDC.C), Hall Axon)

9:30 – 10:00 **Helmut Kettenmann** Berlin, Germany
Introduction and history of glial research

10:00 – 10:45 **Susan C. Barnett** Glasgow, UK
Development of glial cells

10:45 – 11:15 **Frank Kirchhoff** Homburg, Germany
Astrocytes

11:15 – 11:45 **Coffee Break**

11:45 – 12:30 **Vittorio Gallo** Washington, USA
Oligodendrocytes

12:30 – 13:15 **Harald Neumann** Bonn, Germany
Microglia

13:15 - 14:15 **Lunch Break**

14:15 – 15:00 **Kristjan R. Jessen** London, UK
Schwann cells

15:00 – 15:45 **Frank Heppner** Berlin, Germany
Microglia actions in neurodegeneration

15:45 -16:15 **Coffee Break**

16:15 – 17:00 **Trevor Owens** Odense, Denmark
Glial cells in inflammatory disorders

17:00 – 17:45 **Michael Synowitz** Berlin, Germany
Glioma

09:00-18:00 Room 4	Therapeutic strategies for leuko-dystrophies: outcomes & perspectives (taking place at the Estrel Hotel & Convention Center Berlin)
9:00 – 9:30	Odile Boespflug-Tanguy Paris, France Welcoming of the participants
9:30 – 11:00	Patrick Aubourg Paris, France Gene and cell therapies: why, how and when?
11:00 – 11:30	Coffee Break
11:30 – 13:00	Anne Baron-Van Evercooren Paris, France Gene and cell therapies: why, how and when?
13:00 – 14:00	Lunch Break
14:00 – 16:00	Aurora Pujol Barcelona, Spain, Hauke Werner Göttingen, Germany Oxydative stress: a common mechanism for therapeutic target
16:00 – 16:30	Coffee Break
16:30 – 18:00	European database for therapeutic issues: needs and pitfalls Odile Boespflug-Tanguy Paris, France Creation, management and sustainability of a European database Grégoire Moutel and Nathalie Duchange Paris, France Ethical issues and patients' needs

WEDNESDAY, JULY 3, 2013

09:00-13:00 Workshops

09:00-13:00 Workshop I

Hall A

IMAGING OF GLIAL CELL ACTIVITY

Organizers: Hajime Hirase Wako, Japan

Frank Kirchhoff Homburg, Germany

9:00 – 9:10

Frank Kirchhoff Homburg, Germany

Introduction

9:10 – 9:45

Yuji Ikegaya Tokyo, Japan

Functional imaging of neuro-glio-vascular network activity

9:45 – 10:20

Hajime Hirase Wako, Japan

Astrocytic Ca^{2+} surges, gamma oscillations, and synaptic plasticity

10:20 – 10:55

Amit Agarwal Baltimore, USA

Imaging Ca^{2+} transients in astrocyte microdomains using the genetically encoded indicator GCaMP3

10:55 – 11:10 Coffee Break

11:10 – 11:45

Ko Matsui Okazaki, Japan

Optogenetic control of glial cell activity

11:45 – 12:20

Franck Debarbieux Marseille, France

Influence of blood supply on glioblastoma progression: a two photon imaging study

12:20 – 12:55

Valentin Nägerl Bordeaux, France

Dual-color superresolution imaging of synapses and glia cells in living brain slices using STED microscopy

09:00-13:00

Room 1

Workshop II

IN VIVO ANALYSIS OF GLIAL CELLS: PROMISES AND PITFALLS OF GENETIC MANIPULATION

Organizer: Dwight E. Bergles Baltimore, USA

9:00 – 9:10

Dwight E. Bergles Baltimore, USA

Introduction

9:10 – 9:45

Leda Dimou Munich, Germany

Mouse models to study adult oligodendrocyte progenitor cells: their limitations and benefits

9:45 – 10:20	Sandra Goebbels Göttingen, Germany Of mice and man: Prospects and limitations of glial disease models
10:20 – 10:55	Brian Popko Chicago, USA Inducible Cre mice for manipulating oligodendrocytes: promises and problems
10:55 – 11:10	Coffee Break
11:10 – 11:45	Frank W. Pfrieger Strasbourg, France Neuron-glia interactions: models matter
11:45 – 12:20	Hui Zong Charlottesville, USA In vivo analysis of genetic contribution to glial development and functions at cellular resolution using MADM mouse model
12:20 – 12:55	Dwight E. Bergles Baltimore, USA Challenges of manipulating gene expression in dynamic glial cells
09:00-13:00 Room 2	Workshop III ASTROCYTE HETEROGENEITY AND TRANSCRIPTOME ANALYSIS Organizers: Maiken Nedergard Rochester, USA Alexei Verkhratsky Manchester, UK
9:00 – 9:05	Alexei Verkhratsky Manchester, UK Introduction
9:05 – 9:40	Alexei Verkhratsky Manchester, UK Evolution, physiology and pathophysiology of neuroglia
9:40 – 10:15	Andreas Reichenbach Leipzig, Germany Structural heterogeneity of astrocytic cells in vertebrate CNS
10:15 – 10:50	Magdalena Götz Munich, Germany How glial are neural stem cells – insights from genome-wide analysis
10:50 – 11:10	Coffee Break
11:10 – 11:45	Vittorio Gallo Washington, USA Endothelin-1: An astrocyte-derived signal that regulates oligodendrocyte development and regeneration

11:45 – 12:20	Fraser Sim Buffalo, USA Identification and genomic analysis of human neural and oligodendrocyte progenitor cells
12:20 – 12:55	Sergey Kasparov Bristol, UK Fluorescent labelling of astroglial vesicular compartments in cultures and <i>in situ</i>
13:00-14:00	Lunch Break
14:00-14:15 Hall A	Opening
14:15-15:15 Hall A	Plenary Lecture P-01 Chair: Frank Kirchhoff Homburg, Germany Philip G. Haydon Boston, USA The tripartite synapse and sleep/wake cycles
15:15-17:15	Symposia I
Room 2	Symposium S01 GLIAL CELLS IN EPILEPSY: NOVEL ASPECTS ON PATHOGENESIS AND TREATMENT Organizers: Asla Pitkänen Kuopio, Finland Rebecca Matsas Athens, Greece
S01-01	Kjell Heuser Oslo, Norway Bridging the gap between glial dysfunction and the seizing patient – a translational approach
S01-02	Rebecca Matsas Athens, Greece Neural stem cell transplantation in experimental temporal lobe epilepsy
S01-03	Asla Pitkänen Kuopio, Finland Novel treatment targets to combat epilepsy
S01-04	Christian Steinhäuser Bonn, Germany Astrocyte dysfunction in temporal lobe epilepsy

Room 1	Symposium S02 AXOGLIAL INTERACTIONS IN THE ASSEMBLY AND STABILITY OF AXONAL DOMAINS ESSENTIAL FOR RAPID NERVE IMPULSE CONDUCTION Organizer: Peter Brophy Edinburgh, UK
S02-01	Peter Brophy Edinburgh, UK Axonal domains in myelinated nerves: assembly and function
S02-02	Bénédicte Dargent Marseille, France Functional organization of the axon initial segment
S02-03	Elior Peles Rehovot, Israel Proteolytic processing of gliomedin regulates sodium channel clustering at the developing nodes of Ranvier
S02-04	Matthew N. Rasband Houston, USA 'Ankyrin' the paranode
Room 3	Symposium S03 GLIAL CELLS AND CHRONIC PAIN Organizer: Marzia Malcangio London, UK
S03-01	Sabatio Maione Naples, Italy TRPV1-dependent and -independent alterations in the limbic cortex of neuropathic mouse: impact on glial caspases and pain perception
S03-02	Marzia Malcangio London, UK Mechanisms for neuron-microglia communication after peripheral insult
S03-03	Marc Suter Lausanne, Switzerland What links peripheral nerve injury to spinal cord microglial reactivity?
S03-04	Camilla Svensson Stockholm, Sweden Role of spinal glia and toll-like receptor 4 in inflammation-induced pain

Hall A	Symposium S04 MICROGLIAL PHAGOCYTOSIS AND ROS IN DEVELOPMENT AND NEURODEGENERATION Organizers: Guy Brown Cambridge, UK Jau-Shyong Hong Research Triangle Park, USA
S04-01	Guy Brown Cambridge, UK Inflamed microglia kill neurons by phagocytosing them
S04-02	Huiming Gao Nanjing, China Pattern recognition-related inflammatory oxidative insult from microglia mediates chronic neurodegeneration
S04-03	Jonas Neher Tübingen, Germany Phagocytosis executes delayed neuronal death after focal brain ischemia
S04-04	Rosa C. Paolicelli Zurich, Switzerland Microglia in the developing brain: pruning synapses and sculpting neural circuits
Room 5	Symposium S05 GENETIC DISSECTION OF GLIAL CELL DEVELOPMENT AND FUNCTION IN DROSOPHILA Organizer: Christian Klämbt Münster, Germany
S05-01	Marc R. Freeman Worcester, USA Neuron-glia interactions through the Heartless FGF receptor signaling pathway mediate morphogenesis of <i>Drosophila</i> astrocyte-like glia
S05-02	Alicia Hidalgo Birmingham, UK A gene network underlying the glial regenerative response to central nervous system injury in fruit-flies and mammals
S05-03	F. Rob Jackson Boston, USA Vesicle release mechanisms and glia-to-neuron signaling are critical in <i>Drosophila</i> for astrocyte regulation of circadian behavior
S05-04	Christian Klämbt Münster, Germany Development and function of <i>Drosophila</i> wrapping glia
17:15-19:15	Poster Session I and Coffee Break Poster hall
19:15	Opening Reception

CNS is our Sandbox



As a global pharmaceutical company with a mission to improve the quality of life for people diagnosed with psychiatric and neurological disorders, Lundbeck is committed to accelerating our work in central nervous system (CNS) disorders – propelled by decades of cutting-edge innovation. Lundbeck has a deep heritage of discovery and development in psychiatry dating back to the 1950s. We continue to pursue new discoveries with a robust pipeline of psychiatric and neurologic compounds.

Working toward addressing unmet medical needs fuels our passion and drives us forward to make a difference... one patient at a time.

To learn more about Lundbeck, go to www.lundbeckus.com

Welcome to our sandbox. It's expanding all the time.



THURSDAY, JULY 4, 2013

09:00-10:00 Plenary Lecture P-02
Hall A Chair: Robin Franklin Cambridge, UK

Anne Baron-Van Evercooren Paris, France
 Contribution of endogenous and exogenous stem cells to
 remyelination of the central nervous system

10:00-10:15 Coffee Break

10:15-12:15 Symposia II

Room 1 Symposium S06
**IDENTITY AND PLASTICITY OF ASTROGLIAL STEM CELLS IN
 ADULT NEUROGENIC NICHES**
 Organizers: Masato Nakafuku Cincinnati, USA
 Verdon Taylor Basel, Switzerland

S06-01 François Guillemot London, UK
 Regulation of stem cell divisions in the adult brain

S06-02 Sebastian Jessberger Zurich, Switzerland
 Molecular control of stem cell activity in the adult brain

S06-03 Masato Nakafuku Cincinnati, USA
 Identity and plasticity of astroglial stem cells in adult
 neurogenic niche

S06-04 Verdon Taylor Basel, Switzerland
 Molecular and functional diversity in the adult forebrain
 neural stem cell population

Room 2 Symposium S07
**CROSS-TALK BETWEEN IONS AND ENERGY METABOLISM IN
 ASTROCYTES: NEW INSIGHTS FROM IN VITRO AND IN VIVO
 STUDIES WITH OPTICAL PROBES**
 Organizers: Christine R. Rose Düsseldorf, Germany
 L. Felipe Barros Valdivia, Chile

S07-01 L. Felipe Barros Valdivia, Chile
 New tricks for an old cation: fast modulation of astrocytic
 glucose and lactate metabolism by extracellular K⁺

S07-02 Jean-Yves Chatton Lausanne, Switzerland
 Methodological and functional aspects of cytosolic and
 mitochondrial ion signaling

S07-03	Christine R. Rose Düsseldorf, Germany Local and global sodium signalling in astrocytes and astrocyte networks
S07-04	Bruno Weber Zurich, Switzerland In vivo two-photon imaging of energy substrate levels in neurons and astrocytes
Hall A	Symposium S08 MICROGLIAL PRIMING: HOW THE MICROGLIAL POPULATION BECOMES A CNS AMPLIFIER OF SYSTEMIC INFLAMMATION AND WHY IT MATTERS? Organizers: Sophie Layé Bordeaux, France Colm Cunningham Dublin, Ireland
S08-01	Colm Cunningham Dublin, Ireland Systemic inflammation exacerbates cognitive dysfunction in neurodegenerative disease: influence of acetylcholine and type I interferons in microglial priming and IL-1 β expression
S08-02	Pierre Gressens Paris, France Microglial priming – affecting and perpetuating damage in the perinatal brain?
S08-03	Sophie Layé Bordeaux, France Dietary lipids and microglia priming
S08-04	Paul Morgan Cardiff, UK Complement activation as a trigger for microglial priming in models and man
Room 3	Symposium S09 BIOMARKERS OF GLIAL INJURY IN CSF AND BLOOD Organizer: Albee Messing Madison, USA
S09-01	Christian Foerch Frankfurt, Germany Astroglial proteins as biomarkers in stroke
S09-02	Damir Janigro Cleveland and Rochester, USA Serum S100B: A reporter of BBB function and mediator of long-term neuroimmune signaling
S09-03	Albee Messing Madison, USA Biomarkers for Alexander disease, a primary disorder of astrocytes

S09-04 **Axel Petzold** Amsterdam, Netherlands
Glial fibrillary acidic protein: a biomarker for glial pathology in human disease

Room 5 **Symposium S10**
ENDOPLASMIC RETICULUM STRESS AND NEUROLOGICAL DISORDERS
Organizer: Una FitzGerald Galway, Ireland

S10-01 **Una FitzGerald** Galway, Ireland
Calreticulin: a new twist in the endoplasmic reticulum and multiple sclerosis tale

S10-02 **Brian Popko** Chicago, USA
The integrated stress response protects oligodendrocytes from inflammatory demyelination

S10-03 **Christopher Power** Edmonton, Canada
Induction of endoplasmic reticulum (ER) stress in glia by the human endogenous retrovirus-W glycoprotein, Syncytin-1: implications for neuroinflammation

S10-04 **David Ron** Cambridge, UK
Protein folding homeostasis in the endoplasmic reticulum and myelin physiology

12:15-13:15 **Lunch Break**

13:15-15:15 **Poster Session I**
Poster hall

15:15-17:15 **Symposia III**

Hall A **Symposium S11**
THE NEURO-GLIA INTERACTIONS THAT CONTROL REPAIR IN THE NERVOUS SYSTEM
Organizer: Kristjan Jessen London, UK

S11-01 **Frank Bradke** Bonn, Germany
Moderate microtubule stabilization reduces scarring and causes axonal regeneration after spinal cord injury

S11-02 **Tessa Gordon** Toronto, Canada
Peripheral nerve injury and repair in animals and humans: problems and solutions

S11-03 Kristjan Jessen London, UK
Nerve repair depends on c-Jun driven Schwann cell transdifferentiation to generate a specialized repair cell in injured nerves

S11-04 Martin Schwab Zurich, Switzerland
Myelin-derived Nogo-A inhibits regeneration and plastic fiber growth after spinal cord or brain injury

Room 5 **Symposium S12**
ROLE OF GLIAL GABA TRANSPORTERS IN CONTROLLING NEUROTRANSMISSION
Organizer: László Héja Budapest, Hungary

S12-01 László Héja Budapest, Hungary
Astrocytes convert network excitation to tonic inhibition of neurons

S12-02 Sergei Kirischuk Mainz, Germany
Local crosstalk between glutamate and GABA transporters modulate neuronal activity in the neonatal neocortex

S12-03 Istvan Mody Los Angeles, USA
Reduced glial GABA uptake retards functional recovery after stroke

S12-04 H. Steve White Salt Lake City, USA
Functional role for glial and extrasynaptic GABA transporters in the control of seizure activity

Room 2 **Symposium S13**
GLIAL CELLS IN MEMORY, NEURAL PLASTICITY AND NEUROGENESIS: FOCUS ON INTERLEUKIN 1
Organizers: Luisa Minghetti Rome, Italy
Staci Bilbo Durham, USA

S13-01 Staci Bilbo Durham, USA
Early life infection, microglia, and cognition throughout the lifespan

S13-02 Luisa Minghetti Rome, Italy
Functional polarisation of microglial cells and neurogenesis: evidence from in vitro models

S13-03 Barbara Viviani Milan, Italy
How neurons adapt to sense glial response: the role of Interleukin-1 receptor type I

S13-04	Raz Yirmiya Jerusalem, Israel Modulation of behavioral and neural plasticity by glia and IL-1 signaling
Room 1	Symposium S14 ROLE OF MICROGLIA DURING THEIR INVASION OF THE DEVELOPING CENTRAL NERVOUS SYSTEM Organizers: Pascal Legendre Paris, France Michel Rigo Diepenbeek, Belgium
S14-01	José Luis Marín-Teva Granada, Spain Microglial functions in the developing retina
S14-02	Etienne Audinat Paris, France Microglial cells influence the functional maturation of thalamo-cortical synapses in the developing somatosensory “barrel” cortex
S14-03	Pascal Legendre Paris, France Microglia-cells interactions during the invasion of the mouse embryonic spinal cord by microglia
S14-04	Jean-Michel Rigo Diepenbeek, Belgium Complex behaviour of microglia during the embryonic development of the cerebral cortex
Room 3	Symposium S15 ASTROCYTE NETWORK CONTRIBUTION IN NEUROIMAGING SIGNALS Organizers: Jérôme Badaut Loma Linda, USA Anne-Karine Bouzier-Sore Bordeaux, France
S15-01	Jérôme Badaut Loma Linda, USA Contribution of the astrocyte network in brain water diffusion: influence in DWI and DTI signals
S15-02	Anne-Karine Bouzier-Sore Bordeaux, France Functional neuro-energetic and brain imaging: how do astrocytes contribute to the signal?
S15-03	Julien Chuquet Mont-Saint-Aignan, France Compartmentalization of glucose uptake between astrocytes and neurons in vivo
S15-04	Olaf Jöhren Lübeck, Germany Role of the transcription factor HIF-1alpha for the metabolic profile of astrocytes

17:15-17:30	Coffee Break
17:30-18:30	Plenary Lecture P-03
Hall A	Chair: Magdalena Götz Munich, Germany
	Stefano Pluchino Cambridge, UK
	How stem cells speak with immune cells

FRIDAY, JULY 5, 2013

09:00-10:00 Plenary Lecture P-04
Hall A Chair: Vittorio Gallo Washington, USA

Jacqueline Trotter Mainz, Germany
 Wrapping it up: functions of NG2 glia in myelination and at synapses

10:00-10:15 Coffee Break

10:15-12:15 Symposia IV

Hall A Symposium S16
SIGNALING PATHWAYS IN MYELINATION
 Organizers: Kelly Monk Saint Louis, USA
 Rashmi Bansal Farmington, USA

S16-01 Rashmi Bansal Farmington, USA
 Role of Erk-MAP-kinase signaling in myelinating glial cells

S16-02 Wendy Macklin Aurora, USA
 Role of mTOR complex signaling in oligodendrocyte development

S16-03 Kelly Monk Saint Louis, USA
 Molecular mechanisms that control Schwann cell development and myelination: emerging roles for adhesion G protein-coupled receptors

S16-04 Carla Taveggia Milan, Italy
 Neuregulin-1 type III intracellular domain signaling in PNS myelination

Room 3 Symposium S17
GLIA IN THE PATHOGENESIS OF POLYGLUTAMINE NEURODEGENERATION
 Organizers: Thomas Moeller Paramus, USA
 Gwenn Garden Seattle, USA

S17-01 Gwenn Garden Seattle, USA
 Two mouse models of polyglutamine neurodegeneration demonstrate early myelin pathology: cause, effect or catalyst for disease progression?

S17-02 Flaviano Giorgini Leicester, UK
 The kynurenine pathway, neurodegeneration, and glia: mechanisms and therapeutic targets

- S17-03** Thomas Moeller Paramus, USA
Loss of CNS-endogenous IGF-1 in Huntington's disease can be countered using ex vivo gene therapy
- S17-04** Paola Piccini London, UK
Imaging of activated microglia in Huntington's disease

Room 5 **Symposium S18**
THE MÜLLER CELL – THE GLIAL
ALL-ROUNDER OF THE RETINA
Organizer: Antje Grosche Leipzig, Germany



- S18-01** Eric Newman Minneapolis, USA
Müller cell regulation of blood flow in the normal and diabetic retina
- S18-02** Antje Grosche Leipzig, Germany
Gliotransmitter release from retinal (Müller) glia cells
- S18-03** Dan Goldman Ann Arbor, USA
Reprogramming zebrafish Müller glia for retinal repair
- S18-04** Thomas Reh Seattle, USA
Reprogramming mouse Muller glia to retinal progenitors

Room 1 **Symposium S19**
MICROGLIAL ATP SIGNALING: A KEY REGULATOR OF
SYNAPTIC TRANSMISSION AND NEURONAL DISEASES
Organizer: Schuichi Koizumi Yamanashi, Japan

- S19-01** Schuichi Koizumi Yamanashi, Japan
Microglial ATP exocytosis and its pathophysiological consequences
- S19-02** Olivier Pascual Paris, France
Modulation of astrocytic gliotransmission by microglia
- S19-03** Michael W. Salter Toronto, Canada
Role of microglia in opioid-induced hyperalgesia
- S19-04** Peter Illes Leipzig, Germany
The microglial suicide receptor P2X7 is present at adult neural precursor cells of the mouse subventricular zone

Room 2	Symposium S20 NG2 CELLS IN THE INTACT AND INJURED BRAIN: A HETEROGENEOUS POPULATION? Organizers: Leda Dimou Munich, Germany Akiko Nishiyama Connecticut, USA
S20-01	David Attwell London, UK Diversity of NG2 cell number and properties
S20-02	Leda Dimou Munich, Germany Diversity of adult NG2 ⁺ -cells: differentiation properties and reaction to injury
S20-03	Akiko Nishiyama Storrs, USA Regional heterogeneity of NG2 cells (polydendrocytes)
S20-04	Brahim Nait Oumesmar Paris, France A role for Sox17 in oligodendrocyte development and regeneration
12:15-13:15	Lunch Break
13:15-15:15	Poster Session II
Poster hall	
15:15-17:15	Symposia V
Room 2	Symposium S21 (DYS-) REGULATION OF MYELIN MEMBRANE SYNTHESIS Organizers: Ueli Suter Zürich, Switzerland Mark Verheijen Amsterdam, Netherlands
S21-01	Roman Chrast Lausanne, Switzerland Lipid metabolism in aging and disease-affected myelinating glial cells
S21-02	Markus Schwab Göttingen, Germany Lipid synthesis and the regulation of myelin membrane growth
S21-03	Ueli Suter Zurich, Switzerland Lipid biosynthesis, mTOR signaling and myelination
S21-04	Mark H. G. Verheijen Amsterdam, Netherlands Involvement of astrocyte SREBP in CNS myelin membrane synthesis

Network Glia e.V. was founded in 2011 with the goal of enhancing public awareness and scientific exchange on glial cells.



The association has two major activities:

The WEBSITE offers material both for the general public such as

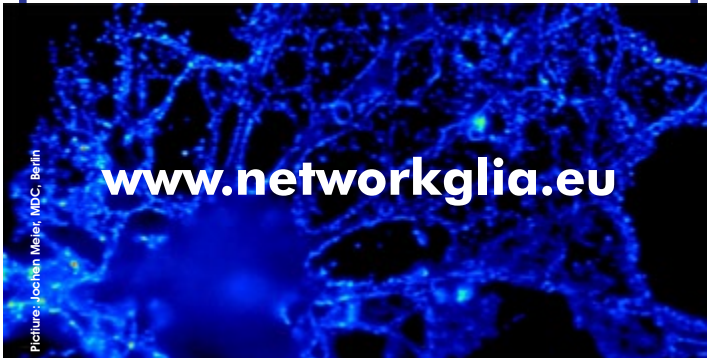
- an introduction to glial cells
- and for glial researchers**
- a list of animal models for glia research
 - an online library with classic glia papers
 - a list of scientific networks in glial research

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A high-magnification fluorescence micrograph showing a dense network of glial cells. The cells are stained with a blue fluorescent dye, highlighting their intricate branching processes and cell bodies against a dark background.

www.networkglia.eu

Picture: Jochen Meier, MDC, Berlin

Sponsored by



Room 5

Symposium S22**FAMILY OF GP130 CYTOKINES AS PROTECTIVE MEDIATORS OF NEUROLOGICAL DISEASE****Organizers:** Niels Hellings Diepenbeek, Belgium

Trevor Kilpatrick Melbourne, Australia

S22-01

Niels Hellings Diepenbeek, Belgium

Family of GP130 cytokines control auto-immune CNS lesions

S22-02

Trevor J. Kilpatrick Melbourne, Australia

Investigating the influence of LIF-receptor signaling upon neural precursors and oligodendroglia as a modulator of demyelinating disease

S22-03

Su Metcalfe Cambridge, UK

NANOMEDICINE: development of LIF-nano for treatment of multiple sclerosis

S22-04

Dirk Schlüter Magdeburg, Germany

Gp130-dependent activation of astrocytes and neurons is critical to control CNS infections and autoimmune diseases

Room 3

Symposium S23**MITOCHONDRIAL Ca^{2+} SIGNALING IN LIFE AND DEATH OF GLIAL CELLS.****Organizer:** Israel Sekler Beer Sheva, Israel

S23-01

Andrey Y. Abramov London, UK

Role of astrocyte signalling in the neurotoxicity of β -amyloid: roles of astrocytes in neuronal death in Alzheimer's disease

S23-02

James Lechleiter San Antonio, USA

Targeting astrocyte mitochondrial ATP production as a strategy to treat brain injuries

S23-03

Israel Sekler Beer-Sheva, Israel

The role of the mitochondrial exchanger NCLX in astrocytic Ca^{2+} signaling, gliotransmission and proliferation

S23-04

Shinguan Ding Columbia, USA

The interplay between cytosolic and mitochondrial Ca^{2+} signaling in astrocytes during ischemia

Hall A **Symposium S24**
ROLE OF EXTRACELLULAR VESICLE SECRETION FROM GLIAL CELLS IN HEALTH AND DISEASE
Organizer: Felipe Court Santiago, Chile

S24-01 **Felipe Court** Santiago, Chile
Role of Schwann cell to axon transfer of vesicles during axonal regeneration

S24-02 **Eva-Maria Krämer-Albers** Mainz, Germany
Delivery on call: the role of exosomes in neuron-glia communication

S24-03 **Johan Skog** New York, USA
Glioma microvesicles (exosomes) as biomarkers

S24-04 **Claudia Verderio** Milan, Italy
Pathogenic role of microglia-derived microvesicles in neuroinflammation and neurodegeneration

Room 1 **Symposium S25**
TRANSLATIONAL REGULATION IN GLIAL CELLS
Organizer: Martin Theis Bonn, Germany

S25-01 **Anna Krichevsky** Boston, USA
MicroRNA in glioblastoma: regulatory functions and clinical applications

S25-02 **Yongjie Yang** Boston, USA
Astroglial FMRP-dependent translational down-regulation of mGluR5 underlies glutamate transporter GLT1 dysregulation in the fragile X mouse

S25-03 **Jason Gerstner** Philadelphia, USA
Diurnal control of trafficking and post-transcriptional processing of the astrocyte Fabp7 mRNA

S25-04 **Martin Theis** Bonn, Germany
Coordinated control of key astrocytic proteins by CPEB3

17:15-17:30 **Coffee Break**

17:30-18:30 **Plenary Lecture P-05**
Hall A **Chair: Eva Syková** Prague, Czech Republic

Suzanaerculano-Houzel Rio de Janeiro, Brazil
You don't mess with the glia: evolution of brain size with conserved non-neuronal scaling rules in mammals

SATURDAY, JULY 6, 2013

09:00-10:00 Plenary Lecture P-06
Hall A Chair: Trevor Owens Odense, Denmark

Alexandre Prat Montreal, Canada
 Molecular control of CNS inflammation at the BBB by
 brain morphogens

10:00-10:15 Coffee Break

10:15-12:15 Symposia VI

Room 2 Symposium S26
**ADAMS AND MMPs DURING MYELIN DEVELOPMENT AND
 MYELIN REPAIR**
 Organizer: Adan Aguirre Stony Brook, USA

S26-01 Adan Aguirre Stony Brook, USA
 Role of ADAM10 and ADAM17 in central nervous system
 myelination and remyelination

S26-02 Riqiang Yan Cleveland, USA
 Differential regulation of myelination by BACE1 and ADAM
 proteases

S26-03 Veronica Shubayev La Jolla, USA
 MMP-9/TIMP-1 axis in regulation of the function of myelin-
 forming Schwann cells in nerve repair and pain

S26-04 Nicola Woodroffe Sheffield, UK
 Effect of silencing ADAM17 expression by an adenoviral
 vector-mediated RNA interference approach in chronic
 relapsing experimental autoimmune encephalomyelitis

Room 3 Symposium S27
**MULTIPLE ROLES OF GLIAL CELLS IN POSTSTROKE
 INFLAMMATION**
 Organizers: Karsten Ruscher Lund, Sweden
 Jasna Kriz Quebec, Canada

S27-01 Karen Gertz Berlin, Germany
 Essential role of interleukin-6 for post-stroke
 angiogenesis

S27-02 Jasna Kriz Quebec City, Canada
 Galectin- 3 as endogenous modulator of injury- induced
 microglia polarization

- S27-03** **Karsten Ruscher** Lund, Sweden
Impact of microglia and immune cell dynamics on neuronal plasticity and recovery after stroke
- S27-04** **Zena Vexler** San Francisco, USA
Microglial cells and neurovascular integrity after stroke

Hall A **Symposium S28**
THE BRAINS BEST FRIEND: THE PROTECTIVE SIDE OF MICROGLIA ACTION
Organizer: Knut Biber Freiburg, Germany

- S28-01** **Knut Biber** Freiburg, Germany
Neuroprotective function for ramified microglia in hippocampal excitotoxicity
- S28-02** **Kate L. Lambertsen** Odense, Denmark
Neuroprotective microglial cytokines in experimental stroke
- S28-03** **Cristina Limatola** Rome, Italy
Neuroprotective activities of CX3CL1 requires cross talk between microglia and astrocytes
- S28-04** **Sarah C. Starossom** Berlin, Germany and Boston, USA
Chi3l3 induces oligodendrogenesis in a model of multiple sclerosis

Room 1 **Symposium S29**
ASTROCYTE CONTROL OF PRE-SYNAPTIC FUNCTION VIA GLIOTRANSMISSION: MECHANISMS AND FUNCTIONAL
Organizer: Andrea Volterra Lausanne, Switzerland

- S29-01** **Marta Navarrete** Madrid, Spain
Neuron-astrocyte communication mediated by endocannabinoid/mGluR signaling at tripartite synapses
- S29-02** **Thomas Nevian** Berne, Switzerland
The control of cortical spike-timing dependent depression by astrocytes
- S29-03** **Richard Robitaille** Montreal, Canada
Astrocytes detect and regulate basal synaptic transmission at single CNS synapses
- S29-04** **Andrea Volterra** Lausanne, Switzerland
Ca²⁺-dependent gliotransmission controls physiological synaptic function and plasticity at hippocampal synapses via atypical presynaptic NMDAR

Room 5	Symposium S30 ADVANCES IN NEUROTRANSMITTER SIGNALING IN PERIPHERAL GLIAL CELLS Organizers: R. Douglas Fields Bethesda, USA Verlio Magnaghi Milan, Italy
S30-01	Menchachem Hanani Jerusalem, Israel How do peripheral glial cells communicate with their environment?
S30-02	Ada Maria Tata Rome, Italy Acetylcholine and M2 muscarinic receptor contribute to modulate Schwann cell proliferation and differentiation
S30-03	Valerio Magnaghi Milan, Italy GABAergic modulation in Schwann cells contributes to myelination and nociception
S30-04	Maria Kukley Tübingen, Germany Do axons in peripheral nerves communicate with Schwann cells via glutamate release?
12:15-13:00	Lunch Break
13:00-15:00 Poster hall	Poster Session II
15:00-16:00 Hall A	Plenary Lecture P-07 Chair: Frank Heppner Berlin, Germany Michael V. Sofroniew Los Angeles, USA Astrocyte roles in CNS disorders
16:00	Departure

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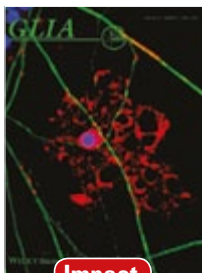
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Poster sessions

POSTER SESSION I

Wednesday, July 3

17:15 – 19:15

Thursday, July 4

13:15 – 15:15

POSTER SESSION II

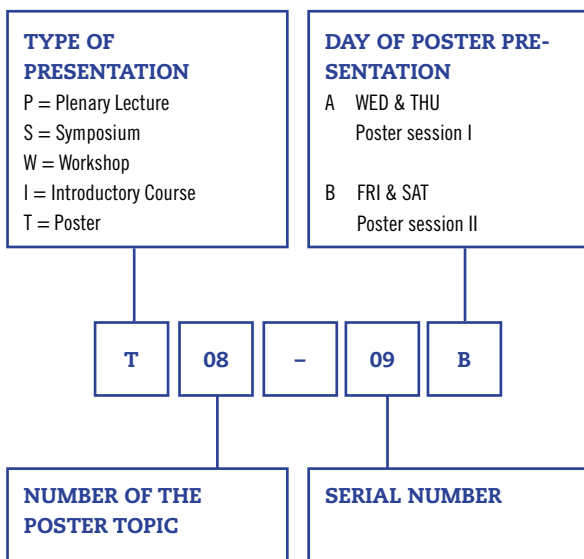
Friday, July 5

13:15 – 15:15

Saturday, July 6

13:00 – 15:00

Explanation of abstract numbers



There is one poster session per day: Poster session I on Wednesday and Thursday, poster session II on Friday and Saturday. Posters with poster numbers ending with an A are displayed on Wednesday and Thursday (= poster session I), posters with a poster number ending with a B are displayed on Friday and Saturday (= poster session II). So every poster will be discussed during two days.

Each poster session (120 min) is divided into two parts (each 60 min): uneven and even serial numbers. In the first part of a session of a day posters with uneven serial numbers will be discussed (e.g. T12-03B). In the second 60 min of a session posters with even serial numbers will be discussed (e.g. T12-02B). Posters should be mounted on the day of presentation until 10:00 h and are supposed to remain displayed until 17:30 (except Saturday; posters can be taken down directly after the poster session).

Poster topics

- T01** Cell proliferation, lineages and differentiation
- T02** Cell signaling
- T03** Degenerative disease, toxicity and neuroprotection
- T04** Extracellular matrix and cell adhesion molecules
- T05** Gene expression and transcription factors
- T06** Glial-neuronal interactions
- T07** Ischemia and hypoxia
- T08** Myelin
- T09** Neural stem/progenitor cells
- T10** Neuroimmunology and neuroinflammation
- T11** Neurovascular interactions
- T12** Regeneration and repair
- T13** Transmitter receptors, ion channels and gap junctions
- T14** Tumors
- T15** Late poster session

Poster session I

Wednesday, July 3

17:15 – 19:15

Thursday, July 4

13:15 – 15:15

T01 CELL PROLIFERATION, LINEAGES AND DIFFERENTIATION

T01-01A

Function of the Nkx2.2 transcription factor in oligodendrocytes and their progenitor cells

C. Fenger, M. Thomassen, B. Emery, T. Kuhlmann, T. Kruse, [B. Finsen](#)

T01-02A

Oligodendrocyte precursor cells generate astrocytes after acute cortical injury

[X. Bai](#)

T01-03A

Glial differentiation is delayed in the hypothalamus of rats malnourished during a restrict period in early life

M. Rocha, P. Fernandes, A.C. Manhães, [P.C. Barradas](#), F. Tenorio

T01-04A

Enhanced human and murine oligodendrocyte differentiation in response to a selective thyroid hormone β receptor agonist

[E. Baxi](#), A. Fairchild, C. Pardo-Villamizar, J. Rothstein, D. Bergles, P. Calabresi

T01-05A

Intrinsic mechanisms regulating oligodendrocyte progenitor cell division: the role of Citron-kinase

[E. Boda](#), S. Piretta, F. Bianchi, F. Di Cunto, A. Buffo

T01-06A

Fast repopulation of microglia after ablation

[J. Bruttger](#), S. Woertge, S. Yona, Y. Wolf, M. Prinz, S. Jung, A. Waisman

T01-07A

Proliferation of reactive astrocytes is enriched in juxtavascular positions

[J. Frik](#), S. Bardehle, M. Krüger, I. Bechmann, L. Dimou, N. Plesnila, M. Götz

T01-08A**Enteric glia: S100B, GFAP and beyond**

D. Grundmann, E. Loris, D. Simon, F. Markwart, W. Huang, F. Kirchhoff,
K.-H. Schäfer

T01-09A**Continuous live imaging of reactive astrocyte divisions in vitro**

G. Heimann, M. Götz, S. Sirko

T01-10A**Thyroid hormone mediated OPC differentiation is 'Hairless'**

M. Hofer, A. Baer, M. Rossner, M. Trotter, M. Kotter

T01-11A**Mouse Schwann cell culture and the expression of L-MAG in Schwann cells and in myelinating cocultures**

H. Honkanen, A. Heape

T01-12A**Variable differentiation potential of NG2 glia during mouse development**

W. Huang, N. Zhao, A. Cupido, X. Bai, A. Scheller, S. Goebbels, F. Kirchhoff

T01-13A**The effect of microglia and secreted factors on cell density in oligodendrocyte precursor cell culture**

K. Kleinsimlinghaus, M. Serdar, R. Marx, I.D. Dietzel

T01-14A**Use of genetic tools to perform in vivo analysis of glia in the enteric nervous system**

R. Lasrado, S. McCallum, W. Boesmans, P.V. Berghe, V. Pachnis

T01-15A**ROCK inhibition with Y27632 promotes the proliferation and cell cycle progression of cultured astrocyte from spinal cord**

X. Luo

T01-16A**Inhibition of endogenous Phosphodiesterase 7 promotes oligodendrocyte precursor survival and differentiation**

E.M. Medina-Rodriguez, F.J. Arenzana, J. Pastor, M. Redondo, V. Palomo,
R. Garcia de Sola, C. Gil, A. Martinez, A. Bribian, F. de Castro

T01-17A

Specification and maintenance of oligodendrocyte precursor cells from neural progenitor cells: involvement of microRNA-7a

X. Zhao

T02 CELL SIGNALING

T02-01A

Cell-specific receptor expression defines the differential response of astrocytes versus microglia to oncostatin M

I. Campbell, M.-P. Hsu

T02-02A

High-resolution electrophysiological determination of unitary exocytic events in cultured astrocytes

A. Guček, J. Jorgačevski, B. Rituper, M. Kreft, R. Zorec

T02-03A

RXR signalling and regulation in oligodendrocyte lineage cells

A. Guzman de la Fuente, J. Huang, B. Nait Oumesmar, C. French-Constant, R. Franklin

T02-04A

TLR-signaling induces Type I interferon responses in microglia and astrocytes and regulates leukocyte infiltration to the CNS

R.M.H. Khorooshi, T. H. Holm, C. Tue Berg, R. Truong Dieu, D. Dræby, S. Lienenklaus, T. Owens

T02-05A

The involvement of NO-mediated signaling in PDT-induced injury of neurons and glial cells

V. Kovaleva, E. Berezhnaya, M. Rudkovskii, A. Uzdensky

T02-06A

Laquinimod reduces astrocytic but not microglial NFkB activation in vitro and in vivo

N. Kramann, R. Pförtner, U.-K. Hanisch, K. Hagemeyer, T. Kuhlmann, W. Brück, C. Wegner

T03 DEGENERATIVE DISEASE, TOXICITY AND NEUROPROTECTION

T03-01A

In vivo imaging of inflammation, de-and remyelination using Fluorescence Molecular Tomography (FMT)

S. Albrecht, C. Geyer, L. Wachsmuth, T. Vogl, C. Faber, M. Eisenblätter, T. Kuhlmann

T03-02A

Beta-amyloid induces apoptosis of phagocytic microglia and macrophages

A. Babcock, L. Ilkjær, M. Wirenfeldt, T. Krøigård, C. Myhre, H. Toft-Hansen, L. Dissing-Olesen, T. Deierborg, S. Darvesh, M. Jensen, M. West, B. Finsen

T03-03A

Decreased expression of alpha1 subunit of Na⁺/K⁺-ATPase in the ALS rat brain

D. Bataveljic, L. Nikolic, P. Andjus

T03-04A

Olesoxime for the treatment of hereditary dysmyelinating diseases: the importance of the therapeutic window

M. Begou, B. Depiets, F. Giraudet, J. Barbier, C. Bechon, M. Michaud, R. Pruss, T. Bordet, O. Boespflug-Tanguy

T03-05A

CD38 deficiency inhibits Alzheimer's disease pathology in a mouse model

E. Blacher

T03-06A

Lack of microglial TREM2 receptor increases susceptibility to dopaminergic degeneration triggered by systemic inflammation

L.-G. Bodea, M. Colonna, H. Neumann

T03-07A

Pericytes are preserved in Alzheimer's disease

L. Brandt, F. Fernández-Klett, L.W. Harris, S. Bahn, J. Priller

T03-08A

Emergence of tyrosine hydroxylase-positive cells in rat cortex after intraventricular injection of 6-hydroxydopamine (6-OHDA)

S. Caradonna, B. Wachter, E. Küppers

T03-09A**Changes of the extracellular space diffusion parameters during aging in a triple transgenic animal model of Alzheimer's disease**

M. Cicanic, L. Vargova, M. Kulijewicz-Nawrot, J.J. Rodriguez, E. Sykova

T03-10A**Vanishing white matter-mutated astrocytes impair oligodendrocyte maturation in vitro**

S. Dooves, A. van de Kreeke, N. Land, G. Jacobs, M. van der Knaap, V. Heine

T03-11A**Intravital characterization of microglia in Alzheimer's disease**

N.H. Drost, J.-L. Rinnenthal, D. Pehl, F.L. Heppner

T03-12A**Alpha-synuclein impairs differentiation of oligodendrocytic CG4 cells**

B. Ettle, V. May, M. Wegner, E. Masliah, J. Winkler

T03-13A**Treatment early in life with the lectin ConA decelerates spreading depression in well-nourished and early-malnourished adult rats**

G. S. Ferreira Soares, L. Cabral Cavalcanti, R.C. Araújo Guedes

T03-14A**Glial Lazarillo protects neurons from type I Spinocerebellar Ataxia (SCA1) degeneration by a mechanism involving the control of autophagy flow and of lipid peroxide clearance**

M. del Caño-Espinel, D. Sanchez, M.D. Ganfornina

T03-15A**N-Arachidonoyl-Dopamine (NADA) is a novel neuroprotective endocannabinoid**

U. Grabiec, M. Koch, R. Kraft, K. Hill, C. Merkwitz, C. Ghadban, B. Lutz, A. Straiker, F. Dehghani

T03-16A**Antagonizing the TGF- β 1 receptor ALK5 reduces gliosis after neonatal hypoxia-ischemia**

M. Guardia Clausi, Z. Ren, D. Giannakidis, S.W. Levison

T03-17A**Ammonium induces an astroglial calcium dysbalance in different brain regions**

N. Haack, C.R. Rose

T03-18A**Astrocytes in the degenerating brain are primed to synthesize exaggerated levels of CXCL1 and CCL2 in response to IL-1b/TNF- α stimulation**

E. Hennessy, C. Cunningham

T03-19A**The L-type voltage-gated calcium channel subunit α_1C ($Ca_v1.2$) is expressed in astrocytes around beta-amyloid plaques in an Alzheimer mouse model**

C. Humpel, N. Daschil, G.J. Obermair, B.E. Flucher, B. Hutter-Paier, M. Windisch, J. Marksteiner

T03-20A**Neuroprotective effects of Withaferin A in three mouse models of amyotrophic lateral sclerosis**

P. Patel, V. Swarup, D. Phaneuf, J. Kriz, J.-P. Julien

T03-21A**Lysosomal enzymes in the hippocampal glial cells of kainic acid treated rats: potential implication in temporal lobe epilepsy**

S. Kar, M. Banerjee, A. Sasse, Y. Wang, M. Maulik

T03-22A**Deletion of TLR-associated signaling adaptor TRIF significantly accelerates disease progression of ALS mice**

O. Komine, N. Fujimori-Tonou, H. Yamashita, Y. Moriwaki, H. Misawa, K. Yamanaka

T03-23A**Early activation of microglia has a central role in the disease pathogenesis of progressive myoclonus epilepsy, EPM1**

I. Körber, T. Joensuu, A.-E. Lehesjoki, O. Kopra

T03-24A**Connexin hemichannels are activated in astrocytes of a murine model of Alzheimer's disease**

A. Koulakoff, C. Yi, X. Mei, C. Giaume

T03-25A**GDNF induces secretion of Cyr61 from retinal Müller glial cells – a novel neuroprotective factor in retinal degeneration**

J. Kucharska, P. del Rio, B. Arango-Gonzalez, M. Gorza, A. Feuchtinger, M. Ueffing, S. Hauck

T03-26A**Glia impair neuron health in juvenile neuronal ceroid lipofuscinosis**

J. Lange, L. Parviainen, G. Anderson, S. Dihanich, P. Rezaie, H. Mitchison, B. Williams, J. Cooper

T03-27A**Axonal degeneration is limited in the optic nerve of EAE-induced mice by AAV2 transduction of Retinal ganglion cells (RGCs) with a site-specific phospho-mutant CRMP-2**

J.Y. Lee, R. Kenny, M.F. Azari, P.M. Aui, K. Magee, A. Harvey, S. Petratos

T03-28A**Nrf2 activators: a novel strategy to promote oligodendrocyte survival in multiple sclerosis?**

J. Lim, S. van der Pol, J. Drexhage, E. de Vries, J. van Horssen

T03-29A**Glial pathology in the prefrontal cortex affects the cognitive function of the rat**

A. Lima, M. Reis, A.F. Oliveira, V.M. Sardinha, C. Mota, L. Pinto, F. Marques, J. Cerqueira, N. Sousa, J. Oliveira

T03-30A**Time-course study of NG2 glia activation in the MPTP mouse model of Parkinson's disease**

Y. Liu, J. Zhou

T03-31A**Assessment of cell toxicity and matrix metalloproteinase-9 expression by antiretroviral drugs in cultured primary astrocytes**

T. Latronico, E. Raimondo, F. Mengoni, M. Lichtner, C.M. Mastroianni, G.M. Liuzzi, G.M. Liuzzi

T03-32A**Molecular mechanisms in astrocytic degradation**

C. Lööf, A. Erlandsson

T03-33A**Effects of prenatal drinking on astrocytes parameters and behavior**

P. Lunardi, G. Brolese, D. Engelke, F. L. Pedroso, N. B. Cunha, P. Nardin, C. Batassini, A.C. Tramontina, C.A. Gonçalves

T03-34A**Energy metabolism deficits in Huntington's disease: key role of astrocytes-neurons interactions**

L. Boussicault, A.-S. Hérard, F. Petit, C. Malgorn, N. Merienne, M.C. Gaillard, C. Escartin, T. Delzescaux, E. Brouillet, P. Hantraye, J. Mariani, C. Vega Riatti, G. Bonvento

T03-35A**Poster will not be presented**

T03-36A**Expression and function of the late-onset Alzheimer disease associated CD33 in human microglia**

M.A. Mathews, M. Grobe-Einsler, K. Roy, H. Neumann

T03-37A**Oligodendrocytes, small heat shock protein HSPB5 (alpha-B-crystallin) and Huntington's disease: What is the link?**

N. Matinyarare, U. Puentener, J. Teeling, J. Morton, A. Wytenbach, V.H. Perry, V. O'Connor, S. Quraishie

T03-38A**In vivo therapeutic effects and oligodendrocyte protection from excitotoxicity by the magl inhibitor JZL184**

S. Mato, A. Bernal-Chico, M. Canedo, M.V. Sánchez-Gómez, A. Pérez-Samartín, R. Rodríguez-Puertas, C. Matute

T03-39A**The role of Connexin43 gap junctions and hemichannels in the pathophysiology of amyotrophic lateral sclerosis (ALS)**

A. Almad, N. Maragakis

T03-40A**The complex interplay between astrocytes and microglia during the development of Alzheimer's-like symptomatology in a mouse model**

D. Bouvier, E.V Jones, R. Quirion, K. K. Murai

T04 EXTRACELLULAR MATRIX AND CELL ADHESION MOLECULES

T04-01A

Roles of anosmin-1 and FGF-2 in the biology of adult oligodendrocyte precursor cells

A. Bribian, E. Medina-Rodriguez, F.J. Arenzana, V. Murcia-Belmonte, P.F. Esteban, F. de Castro

T04-02A

Intracellular trafficking, matrix association and function of VEGF in astroglial cells

K. Egervari, G. Potter, M.-L. Guzmán-Hernández, P. Salmon, T. Balla, B. Wehrle-Haller, J.Z. Kiss

T04-03A

Astrocyte-derived TG2 contributes to ECM production and aggregation, and cell adhesion

N. Espitia Pinzon, W. Baron, J.J. Breve, B. Drukarch, A.-M. van Dam

T04-04A

Characterization of adhesional and cytomechanical properties of single living cells and tissue slices by AFM

T. Müller, T. Neumann, A. Hermsdörfer, C. Pettersson, G. Behme

T05 GENE EXPRESSION AND TRANSCRIPTION FACTORS

T05-01A

Cyclic AMP signaling promotes differentiation of astrocyte transcriptome

S. Paco, M. Hummel, V. Pla, L. Sumoy, F. Aguado

T05-02A

The role of FoxO3a in oligodendrocyte precursor cell differentiation

S. Ali Abdulla, Y. Ahmed Syed, M. Kotter

T05-03A

PGC-1 α expression in neurons and glia cells

H. Bayer, D. Pasche, I. Merdian, J. Eschbach, P. Weydt, A. Witting

T05-04A**Gene regulatory networks underlying astrocyte identity and potential**

A. Bithell, A. Michelucci, I. Crespo, M. Burney, C. Johnston, K.-Y. Wong, S.-W. Teng, B. Williams, L. Stanton, A. Del Sol, N. Buckley

T05-05A**Analysis of astrocyte-specific gene recombination in the brain**

C. Bohn, H. Jahn, F. Kirchhoff

T05-06A**NFAT-c3 promotes calcium-dependent MMP3 expression in activated astroglial cells**

E. Cano, F. Neria, M. Serrano-Pérez, P. Velasco, P. Tranque

T05-07A**Poster will not be presented****T05-08A****Overexpression of CPEB3 leads to astrocyte dysfunction**

T. Deshpande, V. Vangoor, S. Turimella, L. Kaczmarczyk, P. Bedner, E. von Staden, A. Derouiche, R. Jabs, G. Seifert, C. Steinhäuser, M. Theis

T05-09A**Understanding the role of microRNAs in microglia-mediated neuroinflammation**

S. Jadhav, M. Choolani, E.-A. Ling, J. Lu, T. Dheen

T05-10A**Transcriptional remodeling in microglia from the penumbra area in an experimental mouse stroke model**

H. Hirbec, C. Rey, A. Menteyne, N. Nazaret, M. Boulpicante, J. Lachuer, E. Audinat, F. Rassendren

T05-11A**The RNA helicase DDX5 binds MBP mRNA and regulates MBP expression on a posttranscriptional level**

P. Hoch-Kraft, C. Gonsior, R. White, E.-M. Kraemer-Albers, J. Trotter

T05-12A**Promises and pitfalls of Pannexin1 transgenic mice**

R. Hanstein, H. Negoro, N. Patel, A. Charollais, P. Meda, D. Spray, S. Suadicani, E. Scemes

T06 GLIAL-NEURONAL INTERACTIONS

T06-01A

Novel conditional GCaMP3 mouse lines for imaging Ca^{2+} signals in astrocytes

A. Agarwal, E. Hughes, D. Bergles

T06-02A

Lactate modifies neuronal excitability through both NMDA and KATP receptors: importance for plasticity genes expression

I. Allaman, J. Yang, J.-M. Petit, G. Grenningloh, E. Ruchti, P. Jourdain, P. Magistretti

T06-03A

Contribution of different carbonic anhydrase isoforms to proton dynamics in mouse cerebellar glial cells and neurons

M.D. Alt, J.W. Deitmer

T06-04A

Astrocytes in the striatum act as a reservoir of L-DOPA but less convert to dopamine

M. Asanuma, I. Miyazaki

T06-05A

Axon initial segment associated microglia

K. Baalman, M. Rasband

T06-06A

Postnatal down-regulation of the γ_2 subunit of GABA_A receptors in NG2 cells precedes synaptic-to-extrasynaptic change in GABAergic transmission mode

M. Balia, M. Vélez-Fort, S. Passlick, C. Schäfer, E. Audinat, C. Steinhäuser, G. Seifert, M.C. Angulo

T06-07A

Role of neuronal injury in the control of microglia reactivity exerted by GDNF

G. Baltazar, J. Oliveira, T. Roxo, C. Fonseca

T06-08A

Volume coverage by microglial processes is reduced in the aging brain and occurs significantly earlier in mouse models of Alzheimer's disease

R. Baron, A. Nemirovsky, A. Monsonego

T06-09A**Synaptically evoked calcium signals in astrocytic processes enhance the stability of excitatory synapses**

Y. Bernardinelli, E. Janett, I. Nikonenko, E.V. Jones, C.E. Flores, B. Boda, K.K. Murai, C. Bochet, D. Muller

T06-10A**Histamine triggers microglial phagocytosis**

L. Bernardino, T. Saraiva, A.C. Cristóvão, M. Esteves, G. Baltazar, S.M. Rocha

T06-11A**Strongly reduced density of gray matter glutamine synthetase expressing astroglial cells in major depression but not bipolar disorder**

H.-G. Bernstein, G. Meyer-Lotz, M. Walter, H. Dobrowolny, J. Steiner, B. Bogerts

T06-12A**Astrocytes uptake extracellular plasminogen and plasmin to control their levels**

A. Briens, M. Schwalm, F. Docagne, D. Vivien

T06-13A**Microglia reactivity to amyloid- β oligomers (A β O) changes according to experimental ageing**

C. Caldeira, A. Frederico, A.R. Vaz, A. Fernandes, D. Brites

T06-14A**Proteomic identification of astrocyte proteins involved in synaptic plasticity**

K. Carney, P. van Nierop, K.W. Li, A. Smit, S. Oliet, M. Verheijen

T06-15A**Axonal degeneration is assisted cell non-autonomously by glial cells**

A. Catenaccio, P. Silva, F. Court

T06-16A**Astroglial networks set the dynamics of neuronal bursting activity**

O. Chever, E. Dossi, N. Rouach

T06-17A**Microglial modulation of synaptic strength at the first synapse in the nociceptive pathway**

A.K. Clark, D. Gruber-Schoffnegger, J. Sandkühler

T06-18A**Exploring motor neuron signaling dynamics to microglia in ALS**J.C. Cunha, A.R. Vaz, D. Brites**T06-19A****Tailoring substrates for long-term organotypic culture of adult neuronal tissue**V. Dallacasagrande, M. Zink, S. Huth, A. Jacob, M. Müller, J. Käs, S. Mayr, A. Reichenbach**T06-20A****The age-related hippocampal alterations of glutamatergic neurotransmission are aggravated by ω 3 PUFA deficiency and reduced by fish oil supplementation in rats**I. Denis, B. Potier, A. Latour, G. Champeil-Potokar, M. Hennebelle, E. Maximin, B. Langelier, M. Lavialle, J.-M. Billard, C. Heberden, S. Vancassel**T06-21A****The “Yin and Yang” in depression: how astrocytes and neurons differently respond to antidepressants to remodel neuronal synaptic contacts**B. Di Benedetto, S. Giusti, A. Vogl, E. Butz, T. Rein, D. Refojo, R. Rupprecht**T06-22A****The role of glia cells in thyroid hormone induced regulation of neuronal sodium current and Na^+/K^+ -ATPase density**I. Dietzel-Meyer, B. Igelhorst, V. Niederkinkhaus, S. Mohanasundaram**T06-23A****D-Serine released by astrocyte can modulate the respiratory rhythm in neonatal mice**J. Eugenin, S. Beltran-Castillo, I. Llona**T06-24A****Role of the α -secretase TACE in central nervous system myelination**E. Fredrickx, G. Dina, K.-A. Nave, A. Quattrini, C. Taveggia**T06-25A****Neurofilaments protect oligodendrocytes from lysolecithin toxicity in vitro**C. Fressinaud, J. Eyer

T06-26A**Characterization of Schwann cells in mouse sciatic nerve slice: electrophysiological properties and neurotransmitter receptor expression**

N. Fröhlich, D. Eißler, M. Kukley

T06-27A**Transfer of exosomes from oligodendrocytes to neurons**

D. Fröhlich, W.P. Kuo, C. Frühbeis, W. Möbius, K.-A. Nave, A. Schneider, M. Simons, M. Klugmann, S. Pinto, B. Kyewski, J. Trotter, E.-M. Krämer-Albers

T06-28A**Neurotransmitter signaling controls exosome secretion from oligodendrocytes**

C. Frühbeis, D. Fröhlich, S. Tenzer, W.P. Kuo, W. Möbius, A. Saab, F. Kirchhoff, J. Trotter, E.-M. Krämer-Albers

T06-29A**Characterization of glial cells in organotypic cultures of rat retina**

B.I. Gallego, A.I. Ramírez, M. Dierstein, R. de Hoz, B. Rojas, A. Triviño, J. Ramírez, M. Ueffing, J.J. Salazar, B. Arango-Gonzalez

T06-30A**Neuron-astrocyte-microglia interactions in a rat model of chronic cerebral ischemia**

M.G. Giovannini, D. Lana, A. Melani, F. Pedata

T06-31A**Epigenetic induction of the *Ink4a/Arf* locus prevents Schwann cell overproliferation during nerve regeneration and after tumorigenic challenge**

C. Gomis Coloma, J.A. Gomez-Sanchez, C. Morenilla-Palao, G. Peiro, E. Serra, M. Serrano, H. Cabedo Marti

T06-32A**Tonic suppression of synaptic and extrasynaptic inhibition in the striatum as a consequence of GLT-1 deficiency in mice carrying a mutant form of huntingtin**

A. Dvorzhak, A. Wojtowicz, R. Grantyn

T06-33A**Basal forebrain lesions reduce acetylcholinergic tone, induce microglial priming and predispose mice to inflammation-induced cognitive deficits**

E.W. Griffin, R. Field, C. Cunningham

T06-34A**A specific role for the Na,K-ATPase $\alpha 2$ isoform in the support of astrocyte glutamate uptake**N. Illarionova, H. Brismar, A. Aperia, E. Gunnarsson**T06-35A****Astrocyte TNF α -dependent alteration of hippocampal excitatory synaptic transmission in a mouse model of multiple sclerosis**S. Habbas, M. Santello, H. Stubbe, G. Zappia, N. Liaudet, G. Kollias, A. Fontana, T. Suter, A. Volterra**T06-36A****The P2X₇-Panx1 complex in glia: role in orofacial hypersensitivity**R. Hanstein, M. Gulinello, M. Hanani, D.C. Spray**T06-37A****Quantitative profiling of retinal Müller glial cell surface proteome changes in response to LPS treatment**S. Hauck, C. von Toerne, J. Behler, J. Merl, M. Ueffing**T06-38A****Bidirectional expression of Lck-GCaMP3 and DsRed in NG2-cells as an approach for monitoring glial Ca²⁺-microdomains**B.V. Herl, M. Theis, C. Steinhäuser, R. Jabs**T06-39A****Neuroprotection of retinal ganglion cells by Müller glia and astrocytes**J. Higginson, D. Piso, P. Veiga-Crespo, S. Sharma, E. Vecino**T06-40A****Dehydroepiandrosterone sulfate and Sulforhodamine 101 compete for active uptake by an organic anion transporting polypeptide in hippocampal astrocytes**C. Schnell, Y. Hagos, S. Hülsmann**T06-41A****Neuron-astrocyte interactions during the development of the somatosensory cortex in a genetic model of absence epilepsy: from morphology to in vivo calcium imaging**G. Jarre, S. Stambouliau, A. Depaulis, J.-C. Platel, I. Guillemain

T06-42A**Mapping astrocyte heterogeneity by analysis of specific cell surface marker expression**

C. Kantzer, A. Bosio, M. Jungblut

T06-43A**Misfolded truncated tau protein influences neuron-glia interaction via regulation of the “On” and “Off” signalling molecules**

Z. Kazmerova, N. Zilka, M. Zilkova, T. Smolek, M. Novak

T06-44A**Glial GABA transporters downregulate enhanced neuronal activity**

O. Kékesi, G. Nyitrai, P. Szabó, R. Fiáth, I. Ulbert, J. Kardos, L. Héja

T06-45A**Protection effect of glial cell line-derived neurotrophic factor on neurons and glial cells under photodynamic injury**

M. Komandirov, E. Knyazeva, M. Rudkovsky, U. Fedorenko, G. Fedorenko, A. Uzdensky

T06-46A**Macrophages and microglia play distinct roles in neuropathic pain perception**

S. Kraft, K.R. Miller, C. Witzel, R.E. Kälin, G. Pfuhl, Y. Winter, M. Endres, F.L. Heppner

T06-47A**Impact of oligodendrocyte-derived exosomes on neuronal metabolism: a role in neuroprotection?**

W.P. Kuo, D. Fröhlich, C. Frühbeis, C. Zehendner, H. Luhmann, J. Trotter, E.-M. Krämer-Albers

T06-48A**Mechanisms of K⁺-clearance in the brain: the Na⁺/K⁺-ATPase as the key contributor**

B.R. Larsen, M. Assentoft, S.Z. Hua, K. Kaila, J. Voipio, N. MacAulay

T07 ISCHEMIA AND HYPOXIA

T07-01A

The fate of mDach1-expressing cells in the dorsal part of the lateral ventricles following focal cerebral ischemia

M. Anderova, H. Pivonkova, P. Honsa

T07-02A

Age-dependent activity of nitric oxide synthase during ischemic white matter injury

J. Zaleski, A. Bachleda, A. Runkle, S. Baltan

T07-03A

Lactate increases TREK channel activity in CA1 stratum radiatum astrocytes

A. Banerjee, S. Ghatak, S. Sikdar

P07-04A

Neuroprotection in stroke by gonadal steroids: an active role for microglia and astroglia-microglia crosstalk

P. Habib, J. Dang, D. Dreymüller, C. Beyer

T07-05A

Pyruvate carboxylation in astrocytes and the pentose phosphate pathway are affected after neonatal hypoxic-ischemic brain injury – a ^{13}C NMR spectroscopy study

E. Brekke, T. Morken, M. Widerøe, A. Håberg, A.-M. Brubakk, U. Sonnewald

T07-06A

The isolectin IB4 binds RET receptor tyrosine kinase in microglia

A. Casamassa, L. Cerchia, C.L. Esposito, V. de Franciscis, L. Annunziato, F. Boscia

T07-07A

Hypoxia/ischemia increases the expression of TREM2 in gray and white matter of neonatal mice brain

M. Chertoff, K. Shrivastava, L. Gimenez Lloft

T07-08A

Post-ischemic treatment of the standardized *Cordyceps militaris* extract, WIB-801C reduces cerebral ischemic injury and improved long-term survival in rats

G.S. Cho, S. Hwang, C. Ju, W.-K. Kim

T07-09A**Distinct subsets of interleukin-1 receptor antagonist producing cells are neuroprotective after focal cerebral ischemia in mice**

B.H. Clausen, K.L. Lambertsen, A. Babcock, C. von Linstow, T. Deierborg, B. Finsen

T07-10A**Heterogeneity of GFAP-positive glia in the cerebral cortex: from development to injury – single cell gene expression profiling**

D. Dzamba, P. Honsa, V. Rusnakova, A. Stahlberg, M. Kubista, M. Anderova

T07-11A**Attenuated inflammatory response in triggering receptor expressed on myeloid cells 2 (TREM2) knock-out mice following stroke**

C. Frahm, M.W. Sieber, N. Jaenisch, M. Brehm, M. Guenther, B. Linnartz-Gerlach, H. Neumann, O.W. Witte

T07-12A**Comparative analysis of neuronal loss, glial activation and tissue degeneration in different cortical areas of adult rats following focal ischemia**

W. Gomes-Leal, R. Fernandes, R. Rodrigues Lima, E.M.N. Dos Santos

T07-13A**Increased expression of hyperpolarization-activated cyclic nucleotide-gated channels in reactive astrocytes after ischemia**

P. Honsa, L. Harantova, H. Pivonkova, V. Rusnakova, D. Dzamba, M. Kubista, M. Anderova

T08 MYELIN

T08-01A**[1,6-¹³C]glucose metabolism in immature and in differentiated oligodendrocytes in vitro**

A. Amaral, U. Sonnewald, M. Kotter

T08-02A**A vertebrate specific Glutaredoxin affects cellular functions of oligodendrocytes**

C. Berndt, K. Lepka, K. Volbracht, R. Schneider, H.-P. Hartung, T. Prozorovski, O. Aktas

T08-03A**Silencing or knocking-out of the Na⁺/Ca²⁺ exchanger 3 (NCX3) impairs oligodendrocyte differentiation**

F. Boscia, C. D'Avanzo, A. Pannaccione, A. Secondo, A. Casamassa, L. Formisano, N. Guida, L. Annunziato

T08-04A**Resetting translational homeostasis restores myelination in CMT1B mice**

M. D'Antonio, N. Musner, C. Scapin, D. Ungaro, U. Del Carro, D. Ron, M.L. Feltri, L. Wrabetz

T08-05A**The growth factor NRG induces NMDA receptor dependent myelination by oligodendrocytes, employing Akt and CREB signalling**

K. Evans, I. Lundgaard, A. Luzhynskaya, J. Stockley, Z. Wang, C. French-Constant, D. Attwell, R. Karadottir

T08-06A**Effects of TrkB expression and signalling on oligodendrocyte myelination**

A. Ferner, J. Xiao, L. Giuffrida, A. Wong, H. Peckham, T. Kilpatrick, S. Murray

T08-07A**Dysregulation of GPR17, a key receptor involved in oligodendrocyte maturation, as a novel potential pathogenetic mechanism in demyelinating diseases**

M. Fumagalli, E. Bonfanti, S. Daniele, D. Lecca, G.T. Coppolino, M.L. Trincavelli, C. Martini, M.P. Abbracchio

T08-08A**Role of apolipoprotein D in macrophage recruitment and myelin phagocytosis upon peripheral nerve injury**

N. García Mateo, D. Sánchez, C. Lillo, M.D. Ganfornina

T08-09A**GPR56, an adhesion-GPCR, regulates oligodendrocyte development and CNS myelination**

S. Giera, Y. Deng, M. Makinodan, S. DeGenova, K.R. Monk, G. Corfas, X. Piao

T08-10A**Post-transcriptional regulation of myelin basic protein during cell stress conditions**

C. Gonsior, J. Trotter



SFB 665 “DEVELOPMENTAL DISTURBANCES IN THE NERVOUS SYSTEM”

Collaborative research center (SFB) 665 “Developmental Disturbances in the Nervous System” brings together basic and clinical researchers to identify novel mechanisms of normal and disturbed nervous system development. Nervous system diseases take an enormous toll on individuals and their families, and have emerged as one of today’s most important public health issues. Although such diseases cover a vast range of clinical profiles, many originate during-development, which is an extraordinarily complex and lengthy process. The key challenges currently facing this research area can be summarized by the following questions: How can we combine genetic, cellular and biochemical approaches to understand genes and their functions on a mechanistic level? How can insight into molecular mechanisms gained from animal models inform our understanding of developmental disturbances in patients? Conversely, how can new understanding of phenotypes observed in humans advance analysis of gene function in animals? To address these questions, we focus on transcription factors, small inhibitory RNAs, signaling molecules, transporters and molecules that control neural transmission to analyze the molecular and structural basis of higher order functions of the nervous system.

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T08-11A**A₃ adenosine receptor triggers oligodendrocyte death and myelin loss**

E. González-Fernández, R. Arellano, A. Pérez-Samartín, M. Sánchez-Gómez, C. Matute

T08-12A**Long-term consequences of perinatal inflammation on de- and remyelination in the central nervous system**

V. Gudi, K. Bénardais, J. Neßler, V. Singh, L. Gai, T. Skripuletz, M. Stangel
Hannover Medical School, Hannover, Germany

T08-13A**Histone methyltransferase enhancer of zeste homolog 2 regulates Schwann cell differentiation**

A. Heinen, N. Tzekova, N. Graffmann, K.J. Torres, M. Uhrberg, H.P. Hartung, P. Küry

T08-14A**Electrical activity-dependent control of myelin gene expression in vivo**

J. Hines, B. Appel

T08-15A**Remyelination after Cuprizone treatment: Galectin-3 involvement**

H. Hoyos, M. Marder, G. Rabinovich, L. Pasquini, J. Pasquini

T08-16A**Unravelling protein networks involved in peripheral nerve myelination**

S. Kangas, S. Ohlmeier, R. Sormunen, A. Heape

T08-17A**2',3'-cyclic nucleotide 3'-phosphodiesterase (CNP) deficiency causes axonal loss and hypermyelination in the sensory peripheral nervous system**

T. Kungl, T. Nientiedt, K.J. Neufeld, M.W. Sereda, K.-A. Nave

T08-18A**Transport and translation of MBP mRNA is differentially regulated by distinct hnRNP proteins**

J. Torvund-Jensen, J. Stensgaard, L. Fihl, L. Reimer, L. Laursen

T08-19A**Transferrin and thyroid hormone converge in the control of myelinogenesis**

L. Marziali, P. Franco, J. Pasquini

T09 NEURAL STEM/PROGENITOR CELLS

T09-01A

Wnt-signalling regulates oligodendrogenesis in the dorsal postnatal subventricular zone

K. Azim, B. Fischer, K. Basler, L. Sommer, A. Butt, O. Raineteau

T09-02A

Modulation of the proliferation and differentiative potential of adult brain subventricular zone cells by purinergic signaling in vitro and in vivo: contribution of reactive astrocytes

S. Ceruti, M. Boccazzi, C. Rolando, M.P. Abbracchio, A. Buffo

T09-03A

Enteric stem cell niche in Hirschsprung's disease

C.I. Hagl, T. Marie, H. Sabine, W. Elvira, S. Karl-Herbert

T09-04A

Hypothalamic tanycytes: a neurogenic population of radial-glial like cells in the postnatal and adult brain

N. Haan, T. Goodman, A. Nadji-Samieir, C. Stratford, R. Rice, E. Al Agha, S. Bellusci, M.K. Hajhosseini

T09-05A

microRNA regulation of neural precursor maintenance and specification

L. Hudish, B. Appel

T09-06A

Mesenchymal stem cell conditioning promotes oligodendroglial maturation

J. Jadasz, D. Kremer, P. Göttle, N. Tzekova, F.J. Rivera, H.-P. Hartung, L. Aigner, P. Küry

T09-07A

Adult neural stem cells generate waves of oligodendrocyte progenitor cells that populate transiently the corpus callosum but do not contribute to its pool of oligodendrocytes

I. Kazanis, R. Franklin

T09-08A

Artificial cell fate regulation of the progenitor cells in the adult spinal cord

M. Kitada, J.-I. Suzuki, M. Dezawa

T09-09A**Isolation of radial glia-like neural stem cells from fetal and adult mouse brain via selective adhesion to a novel adhesive peptide-conjugate**

T. Kohidi, K. Markó, N. Hádinger, T. Andrási, G. Mező, E. Madarász

T09-10A**Endogenous retinoic acid synthesis contributes to neural stem cell differentiation**

B. Orsolits, A. Borsy, E. Madarász, Z. Mészáros, T. Kóhidi, K. Markó, M. Jelítai, E. Welker, Z. Környei

T09-11A**The Wnt signaling pathway affects the differentiation potential of neonatal neural stem cells in vitro**

J. Kriska, P. Honsa, D. Dzamba, L. Tumova, V. Korinek, M. Anderova

T09-12A**Selective ablation of CNS-resident microglia disturbs homeostasis within the adult hippocampal neurogenic niche**

K. Miller, C. Baufeld, J. Winterer, S. Prokop, K.E. Carney, D. Schmitz, F.L. Heppner

T09-13A**Influence of demyelination and aging on adult oligodendrocyte precursor cells RNA profil: towards an identification of new molecular cues for myelin repair**

S. Moyon, M.-S. Aigrot, L. Dauphinot, M.-C. Potier, M. Trotter, J. Huang, R. Franklin, C. Lubetzki

T09-14A**Characterization of neural precursors derived from mouse iPS cells: in vitro and in vivo after transplantation into the central nervous system**

S. Mozafari, A. Marteyn, C. Laterza, C. Deboux, G. Martino, A. Baron-Van Evercooren

T09-15A**Regulation of ischemia-induced progenitor cell proliferation in the adult mouse hippocampus by the ERK/MAPK effector ribosomal S6 kinase**

K. Karelina, D. Alzate-Correa, K. Obrietan

T09-16A**Oligodendroglial and neurogenic adult subependymal zone neural stem cells constitute distinct lineages and exhibit differential responsiveness to Wnt signaling**

F. Ortega, S. Gascon, G. Masserdotti, A. Deshpande, C. Simon, J. Fischer, L. Dimou, D. Chichung Lie, T. Schroeder, B. Berninger

T10 NEUROIMMUNOLOGY AND NEUROINFLAMMATION**T10-01A****Astrocyte-tissue inhibitor of metalloproteinases-1: the TIMP-ed balance of neuroinflammation: relevance to HIV-1-associated neurocognitive disorders**

A. Ghorpade, J.A. Fields, C. Chao, K. Borgmann, L. Tang

T10-02A**CCL-1 in the spinal cord contributes to neuropathic pain induced by nerve injury**

N. Akimoto, K. Honda, D. Uta, H. Furue, M. Kido, K. Imoto, Y. Takano, M. Noda
Kyushu University, Pathophysiology, Fukuoka, Japan

T10-03A**Impact of microglia-mediated inflammation on hypothalamic homeostasis**

C. Baufeld, K. Miller, F.L. Heppner

T10-04A**Therapeutic efficacy of suppressing the JAK/STAT pathway in multiple models of neuroinflammation**

E. Benveniste

T10-05A**Immune complexes of beta amyloid with specific monoclonal antibodies induce neuronal loss via microglial activation**

V. Borutaite, R. Morkuniene, A. Zvirbliene, I. Dalgediene, P. Cizas, S. Jankeviciute, G. Valincius

T10-06A**Primary microglia lack strict regulation of inflammasome-mediated activation as compared to myeloid macrophages**

S. Burm, E. Zuiderwijk-Sick, A. 't Jong, C. van der Putten, L. van Straalen, S. Amor, P. van der Valk, J. van Horssen, J. Bajramovic

T10-07A**Cannabigerol quinone exerts therapeutic effects in experimental autoimmune encephalomyelitis**

F.J. Carrillo-Salinas, M. Mecha, A. Feliu, L. Mestre, I. Cantarero, C. Navarrete, E. Muñoz, C. Guaza

T10-08A**Lipopolysaccharide-induced brain activation of the indoleamine 2,3-dioxygenase and depressive-like behavior are impaired in obese and diabetic db/db mice**

N. Castanon, A.-L. Dinel, C. André, A. Aubert, S. Layé

T10-09A**Complement-independent modulation of chemokine expression by antibodies in myelinated cultures**

K.J. Chapple, E.-M. Oesau, M. Lindner, C. Linington

T10-10A**Does tissue transglutaminase play a role in leukocyte/monocyte infiltration during experimental multiple sclerosis?**

N. Chrobok, C. Sestito, E.N. Bakker, S. van der Pol, E.H. de Vries, K.K. Fenrich, F. Debarbieux, M.M. Wilhelmus, B. Drukarch, A.-M. van Dam

T10-11A**Neuroprotective function of microglial Siglec-E**

J. Claude, B. Linnartz-Gerlach, H. Neumann

T10-12A**The modification of myeloid-derived suppressor cell population by the synthetic retinoid AM80 abolishes symptom recovery in a murine model of multiple sclerosis**

V. Moliné-Velázquez, F. de Castro, D. Clemente

T10-13A**Characterization of the role of the metallothionein-1 in an animal mouse model of Alzheimer's disease**

G. Comes, Y. Manso, M. Belfiore, J. Carrasco, J. Hidalgo

T10-14A**Cox-2 inhibitors reduce microglia inflammation in vivo**

A. Cupido, B. Catalin, F. Kirchhoff

T10-15A**Anti-epileptic drugs (AEDs) alter the microglial in-/activation state in astroglia/microglia cocultures**

H. Dambach, D. Hinkerohe, Z. Moinfar, N. Prochnow, A. Hufnagel, P.M. Faustmann

T10-16A**IOP induces upregulation of MHC-II and GFAP in the glia of contralateral mice retina to experimental glaucoma**

R. De Hoz Montaña, B.I. Gallego, B. Rojas, J.J. Salazar, A.I. Ramirez, A. Triviño, F.J. Valiente-Soriano, M. Vidal-Sanz, J.M. Ramirez

T10-17A**Peroxisome proliferator-activated receptor- γ agonists protect oligodendrocyte from mitochondrial stress**

R. De Simone, A. Bernardo, C. De Nuccio, S. Visentin, L. Minghetti

T10-18A**Quantitative and phenotypic analysis of mesenchymal stromal cell graft survival and recognition by microglia and astrocytes in mouse brain**

N. De Vocht, D. Lin, J. Praet, C. Hoornaert, K. Reekmans, D. Le Blon, J. Daans, P. Pauwels, H. Goossens, N. Hens, Z. Berneman, A. Van der Linden, P. Ponsaerts

T10-19A**N-3 polyunsaturated fatty acids protect against the cognitive effects of a peripheral inflammation by targeting microglia morphofunctional activity**

J.-C. Delpech, C. Madore, A. Aubert, C. Joffre, S. Layé, A. Nadjar

T10-20A**The neuroprotective effect of a PPAR- γ agonist in microglia-induced neuronal death is abrogated if CD200-CD200R1 interaction is disrupted**

G. Dentesano, J. Serratosa, J.M. Tusell, U. Perpiñà, J. Saura, C. Solà

T10-21A**Microglial activation beyond the Substantia Nigra in Parkinson's disease**

K. Doorn, P.J. Lucassen, J.G.J. Bol, B. Drukarch, W.D.J. van de Berg, A.-M. van Dam

T10-22A**Characterization and modulation of HmIba1 as an activation marker for microglia in the invertebrate model, the leech *Hirudo medicinalis***

F. Drago, A. Accorsi, P.-E. Sautière, F. Croq, C. Lefebvre, C. Van Camp, J. Vizioli

T10-23A**Inflammatory profiling of the satellite glial cells in the dorsal root ganglia of rat experimental neuropathic pain models**

P. Dubovy, V. Brazda, I. Hradilova-Svizenska, I. Klusakova, L. Strejckova

T10-24A**Acidosis affects interleukin-1 β processing in glial cells**

M. Edye, S. Allan, D. Brough

T10-25A**I-TAC signalling in primary rodent astrocytes and human glioma cells requires CXCR4**

J. Engele, M. Puchert, V. Ödemis

T10-26A**Astrocytary IL-6 involment in EAE and traumatic lesions**

M. Erta, M. Giral, S. Jimenez, G. Comes, J. Hidalgo

T10-27A**Imaging reactive astrocytes in vivo by positron emission tomography with TSPO radioligands**

S. Lavis, M. Guillermier, A.-S. Hérard, F. Petit, M. Delahaye, N. Van Camp, L. Ben Haim, V. Lebon, F. Dollé, T. Delzescaux, G. Bonvento, P. Hantraye, C. Escartin

T10-28A**Cross-talk between neurons and non-neuronal cells within sensory neurons: effects on ATP-gated P2X3 receptors**

A. Franceschini, S. Vilotti, T. Bele, A.M.J. Van Den Maagdenberg, A. Nistri, E. Fabbretti

T10-29A**Cannabidiol provides long-lasting protection against the deleterious effects of inflammation in a viral model of multiple sclerosis: a role for A_{2A} receptors**

A. Feliu, M. Mecha, F.J. Carrillo-Salinas, C. Guaza

T10-30A**Lack of astrocytic interleukin-6 enhances high-fat diet-induced obesity in mice**

O. Fernández Gayol, M. Giralto, A. Molinero, B. Ferrer, G. Comes, J. Hidalgo

T10-31A**A novel human in vitro microglia model**

L. Filgueira, S. Etemad, M. Ruitenbergh

T10-32A**Expression of calreticulin and other endoplasmic reticulum stress molecules in a rat model of inflammatory demyelination**

U. FitzGerald, M. Ní Fhlathartaigh, J. McMahon, R. Reynolds

T10-33A**Brain response to traumatic brain injury: interleukin-6 relevance**

M. Giralto, O. Fernandez, R. Ramos, A. Molinero, J. Hidalgo

T10-34A**Are microglia just macrophages? Analysis of both cell types functions after brain injury**

S. Girard, D. Brough, S. Allan

T10-35A**Regulation of microglial proliferation in chronic neurodegeneration**

D. Gomez-Nicola, N.L. Fransen, S. Suzzi, V.H. Perry

T10-36A**Altered microglial response in pre-symptomatic SOD1 mutant mediated disease**

M. Gravel, J. Kriz, E. Abdelhamid

T10-37A**Stimulation of the IL-1 signaling pathway by CNS-infiltrating myelin reactive T cells in zones of axonal degeneration**

M. Grebing, H.H. Nielsen, C. Fenger, M. Söderman, K.T. Jensen, B.H. Clausen, K.L. Lambertsen, M. Thomassen, T.A. Kruse, B. Finsen

T10-38A**Upregulation of c-Jun in the 3xTrg AD model regulates miR-155 expression in glial cells and contributes to neuroinflammation**

J. Guedes, L. Pereira de Almeida, M.C. Pedrosa de Lima, A.L. Cardoso

T10-39A**Ageing augments the behavioural response to systemic *Salmonella Typhimurium* infection in mice – do microglia play a role?**

A. Hart, S.G. Booth, U. Püntener, H. Perry, J. Teeling

T10-40A**Peripheral poly I:C-induced neuroinflammation: role of Toll-like receptor 3 (TLR3) in microglia**

M. Ifuku, S. Hossain, M. Noda, T. Katafuchi

T10-41A**Is an inflammation caused by injury necessary for the brain?**

H. Ikeshima-Kataoka, S. Inui, Y. Matsui, T. Uede, M. Yasui

T10-42A**Phenotype and function of CD11c (dendritic) cells within the CNS**

K. Immig, M. Gericke, A. Lösche, J. Kathrin, L. Wendeburg, U.-K. Hanisch, K. Biber, I. Bechmann

T10-43A**Does systemic inflammation contribute to the progression of age-related hearing loss?**

B. Impey, A.E. Causon, A. Agyemang-Prempeh, J.L. Bailey, C. Verschuur, T.A. Newman

T10-44A**CD14 as a key regulator of TLR-mediated responses of microglia**

H. Janova, T. Regen, D. van Rossum, S. Ribes, A. Götz, R. Nau, W. Brück, U.-K. Hanisch

T10-45A**Immunomodulatory properties of LIF and OSM in multiple sclerosis**

K. Janssens, H. Slaets, B. Vanwijmeersch, P. Stinissen, J. Hendriks, N. Hellings

T10-46A**Role of anti-inflammatory lipid mediators in the resolution of inflammation in microglial cells**

C. Joffre, C. Rey, A. Aubert, S. Layé

T10-47A**Correlation of binding of [³H]PK11195 to lesion type and presence of activated microglia in human multiple sclerosis tissues**

S. Johansson, N. Fouladi, J. Goggi, P. Jones, W. Trigg

T10-48A**Microglial P2Y receptor-mediated motility in situ**

R. Jolivet, C. Madry, D. Attwell

T10-49A**Mesenchymal stem cells require to be in close vicinity with microglia to arrest cell cycle**

S. Jose, S. Vidyadaran

T10-50A**Transcriptional and epigenetic control of microglia polarization into inflammatory or alternative phenotype**

B. Kaminska, M. Dabrowski, M. Maleszewska, A. Steranka, M. Smiech, A. Ellert-Miklaszewska

T10-51A**Differential roles for the small heat shock protein Alpha B-Crystallin in de- & remyelination**

H. Kuipers, J. Yoon, J. Winderl, J. van Horssen, T. Palmer, L. Steinman

T10-52A**Progesterone attenuates astro and microgliosis and decreases inflammatory reaction following spinal cord injury**

F. Labombarda, S. Gonzalez, I. Jure, A. De Nicola

T10-53A**MC4R activation induces BDNF expression through ERK and PI3K in rat astrocytes**

M. Lasaga, L. Carniglia, D. Durand, C. Caruso

T10-54A**Microglial CX3CR1-CX3CL1 signaling contributes to astroglial scarring following mesenchymal stem cell grafting in mouse brain**

D. Le Blon, C. Hoornaert, N. De Vocht, J. Daans, K. Reekmans, Z. Berneman, P. Ponsaerts

T10-55A

Microglia activation in the leech *Hirudo medicinalis*: HmC1q promotes the microglial accumulation through the distinct recognition of gC1qR and cC1qR receptors

C. Lefebvre, A. Bocquet-Garcon, J. Vizioli, C. Van Camp, P.-E. Sautière, F. Drago, M. Salzet, F. Croq

T10-56A

Expression of UNC-93B1 in the CNS

S. Lehnardt, D. Gaessler

T10-57A

Periplaques form extensive lesions in multiple sclerosis spinal cords

A. Lhuillier, M. Chanal, G. Androdias, R. Reynolds, C. Confavreux, S. Nataf

T10-58A

Myosin-dependent functions in microglia

S. Janßen, V. Gudi, C. Trebst, M. Stangel

T11 NEUROVASCULAR INTERACTIONS**T11-01A**

The Hedgehog pathway promotes optimal blood brain barrier functioning

J.I. Alvarez, A. Dodelet-Devillers, H. Kebir, P. Fabre, I. Ifergan, S. Terouz, K. Wosik, M. Sabbagh, M. Bernard, E. de Vries, F. Charron, A. Prat

T11-02A

Deciphering the role of astroglial Cx30 at the gliovascular interface

A.-C. Boulay, C. Giaume, M. Cohen-Salmon

T12 REGENERATION AND REPAIR**T12-01A**

Understanding and manipulating the astrocyte response to spinal cord injury using diblock copolypeptide hydrogels for depot delivery of bioactive molecules

M. Anderson, S. Zhang, Y. Ao, T.J. Deming, M.V. Sofroniew

T12-02A**Comparative study of human mesenchymal stem cells isolated from the olfactory system and bone marrow: effects on myelination**

S. Barnett, S. Johnstone, S. Lindsay

T12-03A**Grey matter astrocytes activated by remote axonal transection mediate structural plasticity**

D. Barson, G. Tyzack, S. Sitnikov, C. Zhao, R. Franklin, R.T. Karadottir, A. Lakatos

T12-04A**ROCK inhibitors decrease actin stress fibres and GFAP while elevating stellation, L-glutamate uptake and AHNAK expression in astrocytes on 3D nanoscaffolds**

P. Beart, N. Zulaziz, C.L. Lau, D. Nisbet, M. Horne, R. O'Shea

T12-05A**Propentofylline improves oligodendrocyte remyelination following gliotoxic injury in the rat brainstem**

E. Bondan, M.D.F. Martins, D.E.M. Baliellas, C.F.M. Menezes, S.C. Poppe

T12-06A**Sip1 expression by Schwann cells plays a role in peripheral nerve regeneration**

B. Brinkmann, S. Quintes, M. Ebert, V. Tarabykin, D. Huylebroeck, U. Suter, K.-A. Nave, M. Sereda

T12-07A**S1PR1-modulation in the convalescence period improves functional recovery and reduces reactive astrogliosis in experimental stroke**

R. Brunkhorst, N. Kanaan, A. Koch, H. Steinmetz, J. Pfeilschifter, W. Pfeilschifter

T12-08A**Combination of growth factor treatment and scaffold deposition following experimental traumatic brain injury show a temporary effect on cellular regeneration**

F. Clausen, A. Erlandsson

T12-09A**Does the developmental heterogeneity of oligodendrocyte origin influence remyelination of the adult central nervous system?**

A. Crawford, R. Tripathi, W.D. Richardson, R.J.M. Franklin

T12-10A**Role of tumor necrosis factor-alpha inhibition following spinal cord injury**

D.G. Ellman, V. Bracchi-Ricard, H.G. Novrup, A. Jain, L. Lyck, L. Lykkemark, D.E. Szymkowski, D.E. Pearce, J.R. Bethea, K.L. Lambertsen

T12-11A**Three Ca²⁺ channel inhibitors in combination reduce chronic secondary degeneration following neurotrauma**

D. Savigni, R. O'Hare Doig, C. Szymanski, C. Bartlett, I. Lozic, N. Smith, M. Fitzgerald

T12-12A**Neuregulin-1 type I enhances functional recovery after acute peripheral nerve injury and rescues axonal loss in a mouse model for Charcot Marie Tooth disease 1A**

R. Fledrich, R.M. Stassart, L.M. Haag, P. Veselcic, D. Czesnik, K.-A. Nave, M.W. Sereda

T12-13A**Demyelinated axons regulate their own remyelination via glutamate signalling to oligodendrocyte precursor cells**

H. Gautier, K. Evans, I. Lundgaard, C. Lao-Peregrín, R.J.M. Franklin, R.T. Káradóttir

T12-14A**Olfactory ensheathing cells promote neurite outgrowth from organotypic spinal cord co-cultures**

K. Gladwin, S. Law, D. Li, D. Choi

T12-15A**Hydrogel as a tool for vascular endothelial growth factor gradual release in peripheral nerve regeneration**

S. Gnani, C. Tonda Turo, L. di Blasio, F. Ruini, L. Primo, S. Geuna, G. Gambarotta, I. Perroteau

T12-16A**Tamoxifen promotes CNS remyelination by modulation of the PKC signalling pathway in oligodendrocyte precursor cells (OPCs)**

G. Gonzalez, A. Baer, J. Rundle, Y. Syed, M. Hofer, R. Franklin, C. Zhao, M. Kotter

T12-17A**Human pluripotent stem cell-derived oligodendrocyte precursor cells for spinal cord injury repair**

A. Hyysalo, M. Mäkinen, L. Ylä-Outinen, T. Joki, S. Narkilahti

T12-18A**HDACs in control of maintenance and regeneration in Schwann cells**

V. Brügger, C. Pattaroni, P. Matthias, U. Suter, C. Jacob

T12-19A**Living art - method for labeling living human derived neural cells with fluorescent probes**

T. Joki, M. Mäkinen, L. Ylä-Outinen, H. Skottman, R. Äänismaa, S. Narkilahti

T12-20A**Bone marrow-derived mesenchymal stem cell intraventricular injection in a chronically demyelinated mouse model**

J. Jones, P. Cruz Martínez, S. Martinez

T12-21A**Perineurial glia: first responders after a peripheral nerve injury**

S. Kucenas, W. Lewis

T12-22A**CD300f immunoreceptor contributes to peripheral nerve regeneration after crush injury**

P. Solari, N. Puig, M. Negro, L. Acarin, J. Sayós, H. Peluffo, N. Lago

T12-23A**Canonical Wnt signaling and formation of the glial scar**

J. Levine, J.P. Rodriguez

T13 TRANSMITTER RECEPTORS, ION CHANNELS AND GAP JUNCTIONS

T13-01A**In search of the satellite glia role: insights from their membrane properties**

S. Agathou, I. Lundgaard, K. Evans, K. Volbracht, R.T. Káradóttir

T13-02A**Phosphorylation of aquaporin-4 at Ser¹¹¹ is not required for channel gating**

M. Assentoft, S. Kaptan, R. Fenton, S.Z. Hua, B. de Groot, N. MacAulay

T13-03A**Inhibition of P2X4 function by P2Y6 UDP receptors in microglia**L.-P. Bernier, A. Ase, E. Boue-Grabot, P. Seguela**T13-04A****Astrocyte volume regulation in the cortex of alpha-syntrophin-negative GFAP/EGFP mice**

O. Butenko, J. Benesova, M. Mikesova, P. Honsa, D. Dzamba, J. Kriska, V. Rusnakova, M. Kubista, M. Anderova

T13-05A**Astrocytes and S1P receptors**K. Dev**T13-06A****MLC1 dysfunction causes brain oedema with white matter vacuolation in murine brain**M. Dubey, M. Bugiani, M. Ridder, J.C. Lodder, M. Verheijen, H. Mansvelder, I. Boor, M. van der Knaap**T13-07A****Purinergic receptors in adipose-derived stem cells differentiated to Schwann cells**A. Faroni, A. Grolla, G. Terenghi, V. Magnaghi, A. Verkhratsky**T13-08A****Connexin mediated glial networks are heterogenous among brain regions**S. Griemsmann, L. Claus, S. Höft, P. Bedner, J. Zhang, R. Jabs, M. Theis, D.W. Cope, V. Crunelli, G. Seifert, C. Steinhäuser**T13-09A****K⁺ effects on oligodendrocytes in ischaemia**N. Hamilton, K. Kolodziejczyk, D. Attwell**T13-10A****Temporally controlled ablation of astroglial P2Y1 receptors**H.M. Jahn, A.S. Saab, A. Verkhratsky, F. Kirchhoff**T13-11A****Scratch-wound induced alterations in glial glutamate transporter distribution and function**W.K. Kafitz, A.E. Schreiner, J. Langer, M.C. Stock, C.R. Rose

T13-12A**Oligodendrocyte-targeted gene therapy to treat leukodystrophy**

A. Kagiava, I. Sargiannidou, S. Bashardes, J. Richter, N. Schiza, C. Christodoulou, A. Gritti, K. Kleopa

T13-13A**Astrocytic CX43 hemichannels and gap junctions play a crucial role in development of chronic neuropathic pain following spinal cord injury**

M. Chen, B. Kress, X. Han, K. Moll, W. Peng, R.-R. Ji, M. Nedergaard

T14 TUMORS

T14-01A**Metabolic reprogramming following mouse cortical astrocytes transformation in vitro: a proteomic study**

A. Bentaib, P. De Tullio, M.P. Junier, P. Leprince

T14-02A**Identification of epigenetic modifications associated with inhibition of the stem and tumorigenic properties of glioblastoma stem cell**

A. Bogeas, K. Kuranda, L.G. Dubois, E.A. El-Habr, S. Sayd, F.-X. Lejeune, A. Dias-Morais, T. Virolle, M. Goodhardt, M.-P. Junier, H. Chneiweiss

T14-03A**Proteomic profiling of human induced pluripotent stem cell-derived microglia upon exposure to glioblastoma cells**

J. Choi, K. Roy, T. Kempf, M. Schnölzer, A. Hotz-Wagenblatt, H. Neumann, A. Régnier-Vigouroux

T14-04A**Pro- versus anti-tumor activities of microglia/macrophages: experimental and mathematical modeling approaches**

L.D.R. Cisneros Castillo, A. Toma, T.M. Buzug, A. Régnier-Vigouroux

T14-05A**Cytostatic and cytotoxic effects induced by M2 muscarinic receptor activation on human glioblastoma cells**

M. Di Bari, V. Tombolillo, F. Alessandrini, C. Conte, F. De Grassi, R. Ricordy, A.M. Tata

T14-06A**Regulation of glioblastoma stem-like cells properties by GABA-related metabolites**

L.G. Dubois, E.A. El-Habr, J. Lipecka, M. Fareh, V. Moura-Neto, T. Virolle, H. Chneiweiss, M.-P. Junier

T14-07A**Tumor suppression effects of miRNA-302-367 on glioblastoma stem cells are correlated with altered GABA metabolism**

E.A. El-Habr, L.G. Dubois, M. Fareh, A. Bogeas, F. Lejeune, J. Lipecka, T. Virolle, M.-P. Junier, H. Hervé Chneiweiss

T14-08A**An allograft glioma model reveals the dependence of aquaporin-4 expression on the brain microenvironment**

P. Fallier-Becker, S. Noell, M. Tatagiba, R. Ritz, H. Woburg, K. Wolburg-Buchholz

T15 LATE POSTER SESSION**T15-01A****Thrombin protects β -arrestin 1-lacking astrocytes from apoptosis through activating PI3K/Akt signaling pathway**

Z. Zhu, G. Reiser

T15-02A**CDH5 is specifically activated in glioblastoma stem like cells and contributes to vasculogenic mimicry induced by hypoxia**

X. Zhang, X.-G. Mao, X.-Y. Xue, W. Zhang

T15-03A**Neuronal but not glial expression of complex gangliosides is necessary for the maintenance of axon and axo-glial junction integrity**

R. McGonigal, D. Yao, J.A. Barrie, H.J. Willison

T15-04A**Blood-brain barrier breakdown in the hippocampus leads to early neural network dysfunction in the peri-ischemic brain**

K. Lippmann, L. Kamintsky, S. Lublinski, J. Nichtweiß, O. Prager, U. Heinemann, A. Friedman

T15-05A**Fingolimod modulates astroglial glutamate metabolism in autoimmune demyelination**

L. Brecht, K. Huhn, R. A. Linker, D.-H. Lee

T15-06A**Netrin-1 contributes to vascular remodeling in SVZ and promotes progenitor emigration after demyelination**

M. Cayre, S. Courtès, F. Martineau, M. Giordano, K. Arnaud, A. Zamaron, P. Durbec

T15-07A**The capsaicin receptor TRPV1 as a novel modulator of neural precursor cell proliferation**

K. Stock, S. A. Wolf, A. Garthe, H. Kettenmann

T15-08A**PDGFR α -positive progenitor cells form myelinating oligodendrocytes and Schwann cells following spinal cord contusion injury**

P. Assinck, G.J. Duncan, N.J. Michaels, D.R. Brown, J.R. Plemel, M.J. Lee, J. Liu, W. Tetzlaff

T15-09A**The phagocyte NADPH oxidase Nox2 promotes microglial chemotaxis and infiltration into the developing cerebral cortex**

A. Lelli, A. Gervais, C. Colin, C. Chéret, C. Ruiz de Almodovar, P. Carmeliet, K.-H. Krause, S. Boillée, M. Mallat

T15-10A**Peroxisomal multifunctional protein-2 deficiency causes neuroinflammation and degeneration of Purkinje cells independent of very long chain fatty acid accumulation**

S. Verheijden, L. Beckers, S. De Munter, C.M. Kassmann, M. Baes

T15-11A**Identification of a glial gene related to Parkinson's disease: split-ends regulates sensitivity to paraquat in *Drosophila***

V. Goubard, M. Querenet, B. Mollereau, N. Davoust

T15-12A**Ascl1/Mash1 promotes brain oligodendrogenesis during myelination and remyelination**

H. Nakatani, E. Martin, H. Hassani, A. Clavairoly, C.L. Maire, B. Zalc, J.-L. Thomas, M. Weber, M. Nakafuku, F. Guillemot, B. Nait-Oumesmar, C. Parras

Poster session II

Friday, July 5

13:15 – 15:15

Saturday, July 6

13:00 – 15:00

T01 CELL PROLIFERATION, LINEAGES AND DIFFERENTIATION

T01-01B

Influence of ECM substrate and chemotropic molecule interactions on OPC migration and differentiation

D. Harlow, W. Macklin

T01-02B

SOX17 affects oligodendrocyte lineage progression and myelination

M. Fauveau, C. Kerninon, M. Frah, B. Nait Oumesmar

T01-03B

Spatiotemporal and genetic fate-mapping of oligodendrogenesis following cuprizone-induced demyelination

T. Merson, Y. Xing, P. Röth, S. Ng, T. Kilpatrick

T01-04B

The stem cell properties of adult olfactory horizontal basal cells

Y.-I. Ohnishi, K. Shinzawa, K. Iwatsuki, T. Yoshimine

T01-05B

An ex-vivo model of radial glial cell development in the spinal cord

J. Pakan, K. McDermott

T01-06B

Mesenchymal stem cells retain their pro-oligodendrogenic activity during aging: a rationale for autologous transplantation in multiple sclerosis

F.J. Rivera, R. Wodnar, M. Feichtner, E. Oberbauer, G. Brachtel, R. Greil, E. Rohde, R.J.M. Franklin, L. Aigner

T01-07B**Lithium promotes generation of oligodendrocytes *ex vivo* in the adult mouse optic nerve**

A.D. Rivera, A. Butt

T01-08B**Low density lipoprotein receptor-related protein 1 (LRP1) is expressed on radial glia cells and controls their differentiation towards oligodendroglia**

D. Safina, E. Hennen, U. Huassmann, P. Wörsdörfer, F. Edenhofer, A. Poetsch, A. Faissner

T01-09B**Probing for oligodendrocyte progenitor cell function by limiting their proliferation in the adult brain**

S. Schneider, C. Simon, M. Irmeler, J. Beckers, G. Eichele, M. Götz, L. Dimou

T01-10B**Differential effects of Wnt3a and lithium on astrocytes in the adult mouse optic nerve**

C. Stagni, A.D. Rivera, A. Butt

T01-11B**Neuroprotective properties of glia-committed NG2-positive cells: comparison with uncommitted mesenchymal stem cells derived from Wharton jelly**

J. Sypecka, A. Sarnowska

T01-12B**Notch signaling in *in vitro* derivation of Schwann cells from bone marrow stromal cells**

E.W.Y. Tai, G.K.H. Shea, A.Y.P. Tsui, K.H.Y. Leung, Y.S. Chan, D.K.Y. Shum

T01-13B**Usefulness of glucose transporter-5, MHC class II, CD68, and Iba-1 as human microglia markers**

K. Takahashi

T01-14B**BMP-Smad1/5/8 signaling is necessary for development of Müller glia**

Y. Ueki, K. Cox, T. Reh

T01-15B**Regional differences in differentiation properties highlight heterogeneity among adult oligodendrocyte progenitor cells**

F. Viganò, M. Götz, L. Dimou

T01-16B**Foxj1 identifies cells other than ependymal epithelia that contribute to CNS remyelination**

B. Wang, D. Ma, E. Rawlins, R.J.M. Franklin, C. Zhao

T02 CELL SIGNALING**T02-01B****Microglial P2Y receptor-mediated currents and ATP release in situ**

C. Madry, R. Jolivet, C. Eder, D. Attwell

T02-02B**Epicatechin promotes the generation of oligodendrocytes *ex vivo* in the adult mouse optic nerve**

F. Pieropan, A.D. Rivera, A.V. Patel, R. Gibbs, P. Cox, A. Butt

T02-03B**Alpha and gamma secretase dependent cleavage of the glial proteoglycan NG2/Kontiki is conserved between species and mediates signalling**

D. Sakry, A. Bustos, F. Biname, B. Altenhein, K. Endres, J. Trotter

T02-04B**Phosphoinositide 3-kinase γ mediates microglial phagocytosis via lipid kinase-independent control of cAMP**

C. Schmidt, N. Schneble, J. Müller, R. Bauer, A. Perino, R. Marone, S.D. Rybalkin, M.P. Wymann, E. Hirsch, R. Wetzker

T02-05B**EphB1/ephrin-B1 reverse signalling induces astrocyte activation**

G. Tyzack, T. Cymes, N. Lau, A. Lakatos

T02-06B**Brain-derived neurotrophic factor/TrkB signaling regulates daily astroglial plasticity in the suprachiasmatic nucleus: electron-microscopic evidence in mouse**

O. Bosler, C. Girardet, B. Lebrun, M.-J. Cabirol-Pol, C. Tardivel, A.-M. Francois-Bellan, D. Becquet

T03 DEGENERATIVE DISEASE, TOXICITY AND NEUROPROTECTION

T03-01B

The role of Glia in the pathogenesis of the ataxic syndrome Dentatorubro-pallidoluysian atrophy (DRPLA)

D. Mazaud, M. Fanto

T03-02B

Aquaporin 4 expression in the rat hippocampus and cortex during trimethyltin-induced neurodegeneration

F. Michetti, S. Ceccariglia, A. D'Altocolle, F. Pizzolante, M. Barba, A. DelFa', C. Gangitano

T03-03B

Branched-chain amino acids influence the immune properties of microglial cells and their responsiveness to pro-inflammatory signals

M.A. Ajmone-Cat, R. De Simone, F. Vissicchio, C. Mingarelli, C. De Nuccio, S. Visentin, L. Minghetti

T03-04B

Pathways used for amyloid-beta uptake by adult human astrocytes and microglia

S. Mulder, T. Aydin, M.A. Hagens, R. Veerhuis

T03-05B

Gap junction activity is necessary for Cx43-mediated protection of astrocytes in response to oxidative stress

C. Naus, H.T. Le, J. Bechberger, S. Lozinsky, J. Vega, W.C. Sin

T03-06B

Glucose transporters in multiple sclerosis

P. Nijland, I. Mihaelidou, S. van der Pol, J. Drexhage, W. Gerritsen, P. van der Valk, H. de Vries, J. van Horssen

T03-07B

HDAC6 is present in rat brain oligodendrocytes and modulates tau phosphorylation

M. Noack, J. Leyk, C. Richter-Landsberg

T03-08B**Importance of oligodendrocytes in oxidative stress-resistance in white matter ischemic injury**

M. Noda, K. Fujita, M. Hamner, C. Higashi, M. Yamafuji, N. Akimoto, M. Kido, Y. Tanaka, Y. Nakabeppu, B. Ransom

T03-09B**Early functional deficit and microglial disturbances in the hSOD1^{G93A} mouse model of amyotrophic lateral sclerosis**

Y. Gerber, J.C. Sabourin, H. Noristani, M. Rabano, M.D.M. Vivanco, F. Perrin

T03-10B**Inhibition of IL-12/IL-23 signaling reduces Alzheimer's disease-like pathology and cognitive decline**

J. Obst, S. Prokop, K. Miller, J. vom Berg, I. Lopategui-Cabezas, A. Wegner, R. Kälin, F. Mair, C. Schipke, O. Peters, Y. Winter, B. Becher, F. Heppner

T03-11B**Oxidative stress causes endoplasmic reticulum stress in X-adrenoleukodystrophy**

F.J. Ortega, N. Launay, E.V. Ilieva, L. Grau, J.J. Martínez, S. Fourcade, P. Aubourg, I. Ferrer, E. Galea, A. Pujol

T03-12B**Intraspinal delivery of PEGylated gold nanoparticles promotes repair after spinal cord injury**

F. Papastefanaki, I. Jakovcevski, F. Schulz, G. Loers, T. Vossmeier, N. Bastús-Gomez, H. Weller, M. Schachner, R. Matsas

T03-13B**Pharmacological inhibition of monoacylglycerol lipase and its effect on physiological parameters in vivo**

N. Pasquarelli, J. Hanselmann, R. Fürtig, C. Porazik, T. Wipp, D. Wiesner, B. Linkus, P. Weydt, B. Ferger, A. Witting

T03-14B**Unlike physical exercise, modified environment increases the lifespan of SOD1^{G93A} mice however both conditions induce cellular changes**

Y. Gerber, J.C. Sabourin, J.P. Hugnot, F. Perrin

T03-15B**Amyloid β impairs expression, traffic and secretion of carboxypeptidase e and secretogranin III in astrocytes**

V. Plá Requena, M. Sánchez-Valpuesta, E. Pozas, I. Ferrer, F. Aguado Tomás



SONDERFORSCHUNGSBEREICH/TRANSREGIO (SFB TRR) 43

The Sonderforschungsbereich/Transregio (SFB TRR) 43 was launched in 2008 as a transregional research venture between Berlin and Göttingen, in which the University Hospital Charité and the University of Göttingen cooperate with the independent research institution Max Delbrück Center for Molecular Medicine (Berlin-Buch), Max Planck Institute for Experimental Medicine (Göttingen) and Max Planck Institute for Infection Biology (Berlin).

The scientific basis of the SFB TRR 43 is the recent insight that immunological processes are not only involved in classical inflammatory disorders of the central nervous system (CNS) such as multiple sclerosis, but also appear to play a major role in the pathogenesis of primarily non-inflammatory or rather “atypical”

neuroimmunological pathologies, such as stroke, brain tumours, and neurodegenerative disorders. In any of these conditions or disorders, immune cells interact with cells of the nervous system via complex signalling cascades. Besides a local crosstalk between cells of the nervous and the immune systems there is increasing evidence that CNS alterations in turn also impact systemic immune responses, which may facilitate either life-threatening (systemic) infections or protect CNS tissue by modulating local CNS actions. Although the initiating, pathogenetically relevant events may differ considerably between various CNS diseases, they seem to utilize common pathways in the (bidirectional) crosstalk between the immune and the nervous system. Deciphering these common pathways is an essential bond and common denominator of the CRC TRR 43 consortium in order to enable the design of regimens that modulate various CNS diseases irrespective of their specific pathogenesis or etiology.

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T03-16B

Diesel exhaust pollution affects learning abilities and leads to an altered stress response in the CNS of the honey bee (*Apis mellifera*)

C. Reitmayer, T. Newman, R. Girling, E. Farthing

T03-17B

Bothropic neurotoxicity in nerve terminals and Schwann cells

T. Rocha, L. Rodrigues Simioni, L.A. Ponce Soto, S. Marangoni, M.A. Cruz Höfling

T03-18B

Effects of in vivo selective expression of mutated huntingtin by mouse striatal astrocytes on functional properties of medium spiny neurons

A.B. Rocher, G. Bonvento

T03-19B

Enriched environment and physical activity reverse astroglial atrophy in the hippocampus of the triple-transgenic model of AD

J. Rodriguez Arellano, S. Terzieva, M. Olabarria, A. Verkhratsky

T03-20B

Astrocyte degeneration correlates with aberrant intracellular calcium signalling in amyotrophic lateral sclerosis

F. Martorana, L. Brambilla, C. Valori, C. Bergamaschi, C. Roncoroni, E. Aronica, A. Volterra, P. Bezzi, D. Rossi

T03-21B

Gray matter oligodendroglia play an important role in human and rodent ALS pathogenesis

Y. Li, S. Kang, D. Bergles, J. Rothstein

T03-22B

Plaque associated-GFAP+ astrocytes show increasing autophagic activity in PDAPP mice, model of Alzheimer's disease

F. Saravia, P. Pavia, C. Pomilio, A. Vinuesa, R. Gorjod, A. Alaimo, M. Kotler, V. Galvan, J. Beauquis

T03-23B

Spatial arrangement of NG2 cells and their activation in a mouse model of Alzheimer's disease

C. Schefft, J. Huck, M. Fächtemeier, J. Priller

T03-24B**Levels of astrocyte-derived proteins increase in the cerebrospinal fluid of Alzheimer's disease patients and inversely correlate to cognitive performance**

C. Schipke, S. Handrick, A. Klostermann, B. Haas, F. Heppner, O. Peters

T03-25B**Data-mining of genomic studies in psychiatric disorders for genes highly expressed in astrocytes**

R. Schmidt-Kastner, N. Pitts, H. Steinbusch, J. van Os, B. Rutten

T03-26B**Inhibition of deubiquitination by PR-619 leads to the formation of protein aggregates, to mitochondrial fragmentation and alters the GFAP network in astrocytes**

V. Seiberlich, O. Goldbaum, V. Zhukareva, C. Richter-Landsberg

T03-27B**Purinergic signalling-regulated glial scar formation**

Y. Shinozaki, S. Koizumi

T03-28B**Conditional ablation of *Perk* in Schwann cells improves myelination in S63del/CMT1B mice**

M. Sidoli, N. Musner, D. Zambroni, S. Saccucci, D. Ungaro, U. Del Carro, D. Ron, D. Cavener, M.L. Feltri, M. D'Antonio, L. Wrabetz

T03-29B**Metabolic alteration in amyotrophic lateral sclerosis**

A. Sternotte, E. Hermans

T03-30B**CNS-targeted methylprednisolone reduces pathology in mouse model of ALS**

H.B. Stolp, M.C. Evans, P. Gaillard, M. de Boer, C. Appeldoorn, R. Dorland, N.R. Sibson, M.R. Turner, D.C. Anthony

T03-31B**Expression of glial potassium channel Kir4.1 and water channel aquaporin-4 (AQP4) after status epilepticus in a mouse model of temporal lobe epilepsy**

K. Szokol, A. Sommer, K. Heuser, E.A. Nagelhus, E. Taubøll

T03-32B**Curcumin increases proliferation and enhances migration of olfactory ensheathing cells**

J. Tello Velasquez, J. St John, R.J. Quinn, J. Ekberg

T03-33B**Litter size, age-related memory impairments, and microglial morphological changes in the rat lateral septum analyzed by three dimensional reconstruction**

L. Viana, C. M. Lima, M. A. Oliveira, I. N. F. Almeida, D. G. Diniz, J. Bento-Torres, A. Pereira, M. Batista-de-Oliveira, A. A. C. Lopes, R. F. M. Silva, R. Abadie-Guedes, A. A. Santos, D. S. Lima, P. F. C. Vasconcelos, C. Cunningham, R. C. A. Guedes, C. C. W. P. Diniz

T03-34B**The effects of N-acetyl-aspartyl-glutamate (NAAG) and N-acetyl-aspartate (NAA) on oligodendrocyte precursor cells**

K. Volbracht, K. Evans, J.H. Stockley, R.T. Káradóttir

T03-35B**New mouse models for vanishing white matter disease**

M. Bugiani, L. Wisse, S. Dooves, N. Postma, V. Heine, T. Abbink, M. van der Knaap

T03-36B**A BDNF mimetic promotes peripheral myelin development and ameliorates experimental autoimmune neuritis (EAN)**

S. Murray, R. Hughes, G. Tran, S. Hodgkinson, A. Wong, H. Peckham, A. Ferner, L. Giuffrida, T. Kilpatrick, J. Xiao

T03-37B**Alterations of juxtaparanodal domains in two rodent models of CNS demyelination**

L. Zoupi, M. Savvaki, K. Markoullis, K. Kleopa, D. Karagogeos

T03-38B**Mitochondrial permeability transition pores but not ryanodine-sensitive endoplasmic reticulum calcium channels are involved in photodynamic injury of sensory neurons and satellite glial cells in the crayfish stretch receptor**

A. Uzdensky, A. Khaitin, I. Ischenko

T03-39B

The mitochondrial serine protease OMI/HtrA2 binds to the NG2 protein expressed by oligodendrocyte progenitor cells: a role for NG2 in homeostasis and stress protection?

F. Maus, D. Sakry, F. Binamé, E.-M. Krämer-Albers, K. Karram, R. Krüger, K. Rajalingam, J. Stegmüller, H. Werner, K.A. Nave, J. Trotter

T04 EXTRACELLULAR MATRIX AND CELL ADHESION MOLECULES

T04-01B

Improving outgrowth and survival of grafted iPSC-derived dopaminergic neurons by L1 and PSA-NCAM

S. Peng, M. Schachner, R. Rössler, E. Boddeke, S. Copray

T04-02B

Migration of microglia in the embryonic neocortex: cellular and molecular interactions

S. Smolders, A. Avila, N. Swinnen, T. Struys, I. Lambrichts, M. Ameloot, N. Hellings, J.-M. Rigo, B. Brône

T04-03B

Role of extracellular matrix and growth factors in oligodendrocyte cytoskeletal reorganization

A. Tripathi, Z. Parikh, P. Pillai

T04-04B

Extracellular space diffusion parameters in the mouse thalamus in Bral2 knock-out mice

L. Vargova, M. Cicanic, E. Sykova

T05 GENE EXPRESSION AND TRANSCRIPTION FACTORS

T05-01B

Microglia immune priming in physiologically aged and senescence accelerated mice: gene co-expression network analysis

I. Holtman, D. Raj, N. Brouwer, B. Eggen, E. Boddeke

T05-02B**Role of the $\beta 2$ adrenergic receptor in multiple sclerosis severity**

C. Jensen, J. Stankovich, H. Butzkeuven, J. De Keyser

T05-03B**Role of ncRNAs in oligodendrocyte precursor differentiation**

S. Marques, G. Castelo-Branco

T05-04B**The IRF8-IRF5 transcription factor axis governs P2X4R^{hi} reactive microglia driving neuropathic pain**

T. Masuda, M. Tsuda, S. Iwamoto, A. Nishiyama, H. Tozaki-Saitoh, T. Tamura, K. Inoue

T05-05B**Targeted CREB activation in astrocytes deeply modifies the gene-expression profile of cortex following a focal injury**

L. Pardo Fernández, A. Schlüter, A. Barco, M. Giralt, J.M. Hidalgo, R. Mateu, L. Giménez-Llort, R. Masgrau, A. Pujol, E. Galea

T05-06B**Circadian variations of gene expression related to neuro-metabolic coupling in astrocytes of anterior and posterior hypothalamus of the mice**

J.-M. Petit, A. Mikhaleva, J. Gyger, P.J. Magistretti

T05-07B**Selective microglial depletion of the transcription factor C/EBP β in LysM-Cre/C/EBP $\beta^{fl/fl}$ mice**

M. Pulido-Salgado, T. Valente, M. Straccia, J.M. Tusell, C. Solà, J. Saura

T05-08B**New role of p53 in retinal astroglia outgrowth and signaling**

A.I. Ramírez, R. Gallego-Pinazo, R. de Hoz, M.D. Pinazo-Durán, B. Rojas, J.J. Salazar, M. Serrano, J. Ramírez

T05-09B**SUMO-1 regulates the inflammatory response of activated microglia via NF κ B-mediated TNF- α release**

P. Rangarajan, B. Tan, E.-A. Ling, S.T. Dheen

T05-10B**Identification and characterization of novel subtypes of astrocytes**

Z. Chen, M. Ghosh, R. Sattler, M. Robinson, J. Rothstein

T05-11B**The transcription factor C/EBP δ participates in the pro-inflammatory and neurotoxic response of activated glia. In vitro and in vivo evidence**

T. Valente, M. Straccia, N. Gresa-Arribas, G. Dentesano, J.M. Tusell, J. Serratosa, C. Solà, J. Saura

T06 GLIAL-NEURONAL INTERACTIONS**T06-01B****Activated satellite glial cells induce peripheral sensitization by increasing glutamate concentration in the trigeminal ganglion**

J.C. Laursen, X.-D. Dong, B.E. Cairns, U. Kumar, R. Somvanshi, L. Arendt-Nielsen, P. Gazerani

T06-02B**Roles of neuregulin 1 type III in the ex vivo generation of fate committed Schwann cells from bone marrow stromal cells**

H.Y. Leung, A.Y. Tsui, G.K. Shea, E.W. Tai, Y. Chan, D.K. Shum

T06-03B**TGF- β 1-induced astrocytic release of interleukin-6: a possible role in epielsptogenesis**

N. Levy, D. Milikovsky, G. Baranuskas, Y. David, M. Ketzeff, S. Abutbul, I. Weissberg, I. Fleidervish, A. Friedman, A. Monsonego

T06-04B**The role of glial cells in nutrient homeostasis of the *Drosophila* brain**

S. Limmer, C. Klämbt

T06-05B**Perturbation of sleep-wake cycle affects astroglial networking**

X. Liu, J.-M. Petit, P.J. Magistretti, C. Giaume

T06-06B**Alterations in microglial behavior during ocular dominance plasticity**

R. Lowery, C. Lamantia, A. Majewska

T06-07B**Lactate modulates network activity in primary cortical neurons**

L. Bozzo, J.-Y. Chatton

T06-08B**Estimation of glycolytic rates of single cells in vivo**

P. Mächler, M. Wyss, R. Guiterrez, M. Zünd, S. Lengacher, P.J. Magistretti, F. Barros, B. Weber

T06-09B**Astrocyte reactivity is associated with changes in the concentration of multiple striatal metabolites in situ**

M.-A. Carrillo-de Sauvage, Y. Bramoulle, L. Ben Haim, F. Aubry, M. Guillermier, G. Auregan, J. Valette, C. Escartin

T06-10B**Alterations of gray matter gap junctions in multiple sclerosis and in EAE**

K. Markoullis, I. Sargiannidou, N. Schiza, R. Reynolds, K. A. Kleopa

T06-11B**Glutamine transport in perisynaptic astrocytes and presynaptic terminals supports glutamatergic transmission at the calyx of Held synapse**

M.-C. Marx, D. Billups, B. Billups

T06-12B**Neuroprotective effects of serotonin 1A agonist target astrocytes**

I. Miyazaki, S. Murakami, M. Takeshima, M. Asanuma

T06-13B**Effects of URMG-099 on tat-treated BV-2 microglia cells**

T. Mockus, J. Puccini, D. Marker, J. Barbieri, S.-M. Lu, H. Gelbard

T06-14B**The role of merlin isoform 2 in neurofibromatosis type 2-associated polyneuropathy**

A. Schulz, S. Baader, M. Niwa-Kawakita, R. Bauer, J. Jung, A. Zoch, S. Schacke, C. Hagel, V. Mautner, O. Hanemann, D. Parkinson, J. Weis, D. Gutmann, M. Giovannini, H. Morrison

T06-15B**Surface dynamics of the astroglial glutamate transporter GLT-1**

C. Murphy-Royal, J. Dupuis, B. Pinson, J. Baufreton, L. Groc, S. Oliet

T06-16B**Post-hypoxic potentiation of breathing is mediated by astrocytes**

Y. Okada, K. Takeda, Y. Oyamada, Y. Oku, F. Miwakeichi, H. Someya, M. Ishiguro, Y. Tamura, M. Pokorski

T06-17B**Unitary synaptic connections between GABAergic interneurons and NG2 cells in the developing somatosensory cortex**

D. Orduz, P.P. Maldonado, M. Velez-Fort, Y. Yanagawa, M.C. Angulo

T06-18B**Alterations of NG2 cell synaptic connectivity following demyelination of corpus callosum**

F.C. Ortiz, A. Sahel, C. Kerninon, P.P. Maldonado, M.C. Angulo, B. Nait Oumesmar

T06-19B**Glial and neuronal mechanisms underlying the label-free intrinsic optical signal**

I. Pál, G. Nyitrai, J. Kardos, L. Héja

T06-20B**Ibudilast and SKF modulate cisplatin-evoked PGE2 release from isolated trigeminal satellite glial cells**

J.N. Poulsen, F. Larsen, F.L. Kristiansen, J.C. Laursen, M. Duroux, P. Gazerani

T06-21B**VMAT2-positive astrocytes affect brain monoamine levels**

L. Pucci, C. Cali, P. Bezzi

T06-22B**Refining methods for studying microglial diversity in the healthy and ageing brain**

K. Renault, J. Vincenti, K. Summers, B. McColl

T06-23B**Microglia protect neurons at the onset of motoneuron developmental cell death and of neuronal network formation in the spinal cord of mouse embryo in vivo**

C. Rigato, N. Swinnen, J.M. Rigo, H. Le Corrionc, P. Legendre

T06-24B**Rapid control of glutamate transport and energy metabolism by extracellular potassium in astrocytes**

T. Rimmelé, J.-Y. Chatton

T06-25B**A new algorithm for counting microglial cells in wholemount mice retinas**

J.J. Salazar, B.I. Gallego, A.I. Ramírez, B. Rojas, R. de Hoz, A. Triviño, J. Ramírez, P. De Gracia

T06-26B**The role of myelin gap junctions in the regulation of axonal cytoskeleton**

N. Schiza, I. Sargiannidou, K. Kleopa

T06-27B**The principle of Ca^{2+} integration in single astrocytes**

Y.-W. Wu, X. Tang, M. Arizono, H. Bannai, P.-Y. Shih, M. Tanaka, S. Itoharu, K. Mikoshiba, A. Semyanov

T06-28B**Function of human-specific sialic acid binding receptor Siglec-11 in amyloid- β mediated neurotoxicity**

A. Shahraz, J. Kopatz, H. Neumann

T06-29B**Ultrastructural investigation of lateralized experience-dependent synaptic plasticity in rat hippocampal CA1 stratum radiatum**

Y. Shinohara, A. Hosoya, H. Hirase

T06-30B**Super-resolution optical microscopic measurements of synaptobrevin 2 in vesicles of cultured astrocytes**

P. Singh, M. Potokar, M. Kreft, R.F. Stout, J. Jorgacevski, V. Parpura, R. Zorec

T06-31B**Effects of P2Y₁₂ signaling on microglial morphology and motility in visual cortex**

G. Sipe, A. Majewska

T06-32B**Nascent nodes of Ranvier are formed on hippocampal GABAergic neurons prior to myelination**

N. Sol-Foulon, S. Freeman, A. Desmazières, M. Gatta, J. Simonnet, P. Michel, S. Guerreiro, D. Fricker, Y. Yanagawa, C. Lubetzki

T06-33B**K⁺ and glutamate trigger the release of lactate from astrocytes within seconds, as detected by a lactate sniffer cell**

T. Sotelo Hitschfeld, I. Ruminot, A. San Martin, L.F. Barros

T06-34B**Remodeling of glial coverage of rat NTS glutamatergic synapses after ozone inhalation**

C. Strube, K. Chounlamounry, V. Penalba, F. Gackiere, J.-P. Kessler

T06-35B**Somatic integration of synaptic inputs in NG2 cells**

W. Sun, D. Dietrich

T06-36B**Inhibitory avoidance learning is associated with altered expression of genes involved in neuron-glia metabolic coupling**

M. Tadi, G. Grenningloh, S. Lengacher, I. Allaman, P. Magistretti

T06-37B**Astrocytic Ca²⁺ signals affect on tripartite synapse structure and hippocampus-related learning and memory**

M. Tanaka, P.-Y. Shih, H. Gomi, T. Yoshida, J. Nakai, R. Ando, T. Furuichi, K. Mikoshiba, A. Semyanov, S. Itohara

T06-38B**Optogenetic interrogation of the mechanism of astrocyte-neurone communication in the locus coeruleus**

S. Lane, F. Tang, S. Kasparov, A. Teschemacher

T06-39B**Potential physiological role of astrocytic glycogen-derived lactate in energy balance**

J. Thaler, M. Dorfman, M. Matsen, M. Schwartz

T06-40B**A new approach to understanding the 3D structure of the CNS node of Ranvier**

K. Tohyama, T. Hanasaka, K. Ogasawara, E. Matsuura, T. Nozaki, K. Ishida

T06-41B**IOP induces qualitative but not quantitative changes in astrocytes in mice retina contralateral to experimental glaucoma**

A. Triviño, B.I. Gallego, B. Rojas, R. de Hoz, A.I. Ramírez, J.J. Salazar, F.J. Valiente-Soriano, M.P. Villegas-Pérez, J. Ramírez

T06-42B**Role of CX3CR1 in supporting cell-to-cell contacts between microglia and degenerating TH+ neurons**

J. Uhlrich

T06-43B**BDNF-mediated enhancement of LTP is modulated by astrocytes**

S. Vaz, A. Sebastião

T06-44B**Chronic stress induces profound structural remodelling of astrocytes within the prefrontal cortex: A characterization of the relationship between astrocyte morphology and density**

R. Tynan, S. Beynon, M. Nilsson, F. Walker

T06-45B**Regulation of nutrient transport across the BBB**

A. Weiler, S. Limmer, C. Klämbt

T06-46B**Metabolic imaging in the awake mouse**

M. Wyss, M. Zünd, J. Mayrhofer, P. Mächler, F. Barros, B. Weber

T06-47B**Lactate as a signaling molecule for the regulation of plasticity-related genes expression**

J. Yang, P. Jourdain, J.-M. Petit, G. Grenningloh, E. Ruchti, I. Allaman, P. Magistretti

T06-48B**Amino acid exchanger in the brain of Drosophila: phylogenesis, expression and function**

A.B. Ziegler, M. Simonnet, Y. Grosjean

T07 ISCHEMIA AND HYPOXIA

T07-01B

Microglia express the dopaminergic D2 receptor upon activation in experimental stroke

J. Huck, P. Mergenthaler, N. Gladow, J. Priller

T07-02B

Transplantation of cerebral microvascular endothelial cells promotes remyelination in ischemic white matter damage

Y. Ishizaki, S. Puentes, M. Kurachi, K. Shibasaki, M. Naruse, Y. Yoshimoto, M. Mikuni, H. Imai

T07-03B

Sirt1 regulates the regenerative response of white matter oligodendrocyte progenitor cells after neonatal hypoxia

B. Jablonska, M. Gierdalski, M. Catron, V. Gallo

T07-04B

Cannabinoid receptor antagonists/inverse agonists, hinokiresinols regulate astroglial heme-oxygenase-1 expression and microglial migration

C. Ju, P. Prather, W.-K. Kim

T07-05B

Long-term activation of the hippocampal neurogenic niche following stroke

S. Keiner, M. Storch, O.W. Witte, C. Redecker

T07-06B

Oxygenation regulates monocarboxylate transporter 4 (MCT4) expression via HIF-1a in primary cultures of mouse cortical astrocytes

K. Rosafio, L. Pellerin

T07-07B

Metabolic impairment of Müller glia differentially affects retinal ganglion cell survival after acute ischemia/reperfusion in the mouse eye in vivo

T. Vohra, R. Schultz, O. Witte, C. Schmeer

T07-08B

Phenotypic characterization of CD200R+ microglia/macrophages and CD200+ neuronal cells in Neonatal C57BL/6 mice brain following hypoxia/ischemia

K. Shrivastava, M. Chertoff, L. Gimenez-Llort, B. Gonzalez

T07-09B**Glial activation following oxygen-glucose deprivation**

G. Skibo, M. Orlovsky, G. Maleeva, M. Patseva, I. Lushnikova

T07-10B**Differentiated character of astroglial proliferative response to transient ischemia in the cerebral cortex and striatum of the rat**

A. Steliga, M. Waskow, S. Wójcik, G. Lietzau, I. Klejbor, Z. Karwacki, P. Kowiański

T07-11B**Glial expression of metabotropic glutamate receptors in the mouse optic nerve: a role in ischemia mediated disruption in postnatal CNS white matter**

I. Vanzulli, A. Butt

T07-12B**Ischemic preconditioning in vivo and hypoxia-hypoglycemia in vitro induce interferon stimulated gene expression in microglia**

J. Weinstein, R. Lee, S. Noor, J. Colman, S. Murphy, T. Möller

T07-13B**Involvement of TREK-1 channel activity in astrocyte function and neuroprotection under ischemia conditions**

M. Xie, X. Wu, Y. Liu, X. Chen, Q. Sun

T08 MYELIN**T08-01B****FASN-mediated fatty acid homeostasis is critical for myelination**

L. Montani, M. Trötz Müller, B. von Niederhäusern, P. Dimas, H. Pohl, C.F. Semenkovich, H.C. Köfeler, S. Jessberger, U. Suter

T08-02B**The nootropic agent nefiracetam is a potential remyelinating therapeutic in vivo**

R.P. Murphy, E.A. Keogh, S.D. O'Shea, G. Bowen, M. Pickering, K.J. Murphy

T08-03B**Kif13B motor protein regulates myelination in the peripheral and central nervous system**

R. Nosedà, S. Scarlino, D. Triolo, D. Sherman, L. Feltri, L. Wrabetz, K.A. Nave, R.L. Haganir, S.C. Previtali, A. Bolino

T08-04B**Exploring the mechanism of action of the novel remyelinating therapeutic Nefiracetam**

S.D. O'Shea, E.A. Keogh, R.P. Murphy, G. Bowen, M. Pickering, K.J. Murphy

T08-05B**Up-regulation of the multiligand receptor megalin/ LRP-2 in multiple sclerosis**

M. Ortega, D. Clemente, F. de Castro

T08-06B**The adaxonal compartment of CNS myelin: septin filaments are required to prevent pathological outfoldings of myelin sheaths**

J. Patzig, W. Möbius, S. Tenzer, K. Nave, H. Werner

T08-07B**Ganglioside GD1A: a novel molecular tool to promote remyelination in MS lesions?**

J. Qin, D. Hoekstra, W. Baron

T08-08B**The transcription factor Sip1 is required for peripheral nerve myelination**

S. Quintes, B. Brinkmann, M. Ebert, T. Kungl, V. Tarabykin, D. Huylebroeck, D. Meijer, K.-A. Nave, M. Sereda

T08-09B**Role of Jun activating binding protein 1 (Jab1) in central nervous system (CNS) myelination**

C. Rivellini, E. Porrello, G. Dina, K.-A. Nave, C. Lappe-Siefke, R. Pardi, A. Quattrini, S.C. Previtali

T08-10B**In vivo pathogenesis of demyelination in an animal model of multiple sclerosis**

E. Romanelli, S. Potz, D. Merkler, M. Weber, D. Bishop, T. Misgeld, M. Kerschensteiner

T08-11B**Efficient lentiviral gene delivery to Schwann cells**

I. Sargiannidou, A. Kagiava, S. Bashardes, J. Richter, N. Schiza, C. Christodoulou, A. Gritti, K. Kleopa

T08-12B**Modulation of neuregulin-1 signaling in S63del-CMT1B neuropathy**

C. Scapin, C. Ferri, E. Pettinato, V. Volpi, M. Schwab, K.-A. Nave, C. Taveggia, M.L. Feltri, M. D'Antonio, L. Wrabetz

T08-13B**Schwann cell neuregulin-1 constitutes an endogenous factor of myelin repair**

R.M. Stassart, R. Fledrich, V. Velanac, D. Meijer, M. Schwab, M.W. Sereda, K.-A. Nave

T08-14B**Schwann cell type-specific requirements of Dynamin-2 function revealed by gene ablation**

E. Tinelli, J. Pereira, U. Suter

T08-15B**Oligodendrocyte production in the adult CNS: myelin remodelling or replacement?**

R. Tripathi, I. McKenzie, E. Kougioumtzidou, W. Richardson

T08-16B**Immunoglobulin dependent modulation of Schwann cell differentiation: implication for peripheral nerve damage and disease**

N. Tzekova, A. Heinen, S. Bunk, C. Hermann, H.-P. Hartung, P. Küry

T08-17B**The role of the ERAD pathway in the pathophysiology of PNS myelination**

V. Volpi, E. Pettinato, C. Ferri, C. Scapin, H.L. Ploegh, M.L. Feltri, L. Wrabetz, M. D'Antonio

T08-18B**Ectopic myelination of cerebellar granule cell axons triggered by PtdIns(3,4,5)P3-dependent neuronal signals**

G.L. Wieser, A. Pieper, B. Weege, S.P. Wichert, W. Hinrichs, M.J. Rossner, K.-A. Nave, S. Goebbels

T08-19B**Functions of exon-II containing isoforms of myelin basic protein in oligodendrocytes**

H. Yigit, L. Meyer, C. Gonsior, P. Hoch-Kraft, J. Trotter

T08-20B**Myelin basic protein synthesis is regulated by small non-coding RNA 715**

N. Bauer, C. Müller, J. van Horssen, H. Luhmann, R. White

T09 NEURAL STEM/PROGENITOR CELLS

T09-01B

Neurogenic and gliogenic astroglial progenitors in the developing cerebellum

E. Parmigiani, K. Leto, C. Rolando, A. Buffo, F. Rossi

T09-02B

Generation of oligodendrocyte precursors by direct cellular reprogramming

M. Pawlowski, M. Trotter, M. Kotter

T09-03B

Mechanisms of activation of the adult subventricular zone in response to inflammatory demyelination

F. Pourabdolhossien, C. Deboux, V. Tepavcevic, A. Baron Van-Evercooren

T09-04B

GFAP-positive cells are multipotent progenitors with limited self-renewal potential in the adult spinal cord

R. Fiorelli, O. Raineteau

T09-05B

Distinct roles of Nogo-A and Nogo Receptor 1 in the homeostatic regulation of adult neural stem cell function

C. Rolando, R. Parolisi, E. Boda, F. Rossi, V. Taylor, A. Buffo

T09-06B

The impact of erythropoietin and its isoforms on murine neurogenesis

S. Rolfes, E.-M. Lyras, C. Böttcher, J. Priller

T09-07B

Stimulation of Müller glia proliferation and progeny generation in the mouse retina

P. Schaefer, K. Anastissiadis, M.O. Karl

T09-08B

The human enteric nervous system: an appropriate autologous source for neural stem cells

K.-H. Schäfer, C. Hagl, S. Heumüller, E. Wink, A. Moosmann, D. Grundmann

T09-09B

High efficiency transfection and survival rates of oligodendrocyte precursor cells achieved by electroporation

S. Schröder, B. Bertram, A. von Holst

T09-10B

Two neurogenic factors with synergistic action, Cend1 and Neurogenin-2, drive astrocytic reprogramming towards multipotency and neurogenesis

K. Aravantinou-Fatorou, R. Matsas, B. Berninger, D. Thomaïdou

T09-11B

Towards remyelination therapy: derivation of oligodendrocyte precursors from adult bone marrow stromal cells

Y.P. Tsui, R. Li, A. Lo, Y. Chan, D. Shum

T09-12B

Subventricular glial nodules in the third and lateral ventricles of the human brain contain neural stem cells

M. van Strien, S. van den Berge, J. Sluijs, E. Hol

T09-13B

Neural stem cell properties of an astrocyte subpopulation sorted by sedimentation field-flow fractionation

N. Vedrenne, V. Sarrazy, S. Battu, N. Bordeau, F. Billet, V. Coronas, A. Desmoulière

T09-14B

Adult spinal cord and adult DRG sphere-forming cells exhibit distinct but promising features for CNS remyelination

M. Vidal, M. Maniglier, V. Zujovic, C. Deboux, A. Baron-Van Evercooren

T09-15B

Cx3cr1-expressing cells analysis reveals distinct features of microglia residing within the postnatal subventricular zone/rostral migratory stream

A. Xavier, J. Menezes, M. Nedergaard

T09-16B

Poster will not be presented

T10 NEUROIMMUNOLOGY AND NEUROINFLAMMATION

T10-01B

Nogo-66/NgR signal is involved in neuroinflammation through regulating microglia inflammatory mediators expression

J. Yan, Z. Zhang, X. Zhou, H. Liao

T10-02B

FGF9 inhibits remyelination via an off target effect on astrocytes

M. Lindner, A. Arthur, C. Elliott, A. Williams, E. Meinl, H. Lassmann, C. Linington

T10-03B

Astrocyte-targeted production of IL-10 modifies glial phenotype

G. Llovera, B. Almolda, I. Barrera, C. de Labra, B. Ferrer, M.J. Hofer, I.L. Campbell, J. Hidalgo, B. González, B. Castellano

T10-04B

Nutritional n-3 polyunsaturated fatty acid deficiency impairs microglial cell activity in the developing brain

C. Madore, C. Portal, A. Aubert, A. Sere, A. Nadjar, C. Joffre, S. Layé

T10-05B

The effect of milnacipran and venlafaxine in a rat neuropathic pain model: glia cell modulation

W. Makuch, E. Rojewska, M. Zychowska, K. Popiolek-Barczyk, J. Mika, B. Przewlocka

T10-06B

Telomere dysfunction leads to changes in microglial numbers and morphology in a mouse model of premature aging

A. Manzoor Khan, A. Babcock, H. Saeed, M. Kassem, B. Finsen

T10-07B

The Lactosylceramide synthase B4galt6 controls astrocytes activation during chronic CNS inflammation

L. Mayo, M. Nadeau, M. Blain, I. Mascanfroni, A. Yeste, J.P. Antel, S.A. Trauger, H.L. Weiner, F.J. Quintana

T10-08B**TLR2-induced MMP9 activation compromise blood brain barrier and enhances brain damage in collagenase-induced intracerebral hemorrhage**

H. Min, Y.-H. Jang, J. Hong, K.I. Kwak, S. Lee, S.J. Lee

T10-09B**Retinoic acid, a novel regulator of blood-brain barrier function in neuroinflammation**

M. Mizee, S. van der Pol, J. Drexhage, B. van het Hof, R. Mebius, P. van der Valk, J. van Horssen, A. Reijerkerk, E. de Vries

T10-10B**ABCD2 expression modifies the phenotype in ABCD1 deficient mouse peritoneal macrophages**

Z. Muneer, C. Wiesinger, G. Regelsberger, J. Berger, S. Forss-Petter

T10-11B**Anti-inflammatory properties of omega 3 supplementation restore normal microglia-neuron interactions in the hippocampus in a model of prenatal inflammation**

A. Nadjar, C. Madore, A. Sere, A. Aubert, S. Layé

T10-12B**Sildenafil (Viagra®) prevents glial activation in a mouse demyelination model possibly via NFκB**

A.K. Nunes, C. Raposo, R. Luna, S. Araújo, W. Oliveira, A.G. Oliveira, K. Barbosa, M.A. Hofling, C. Peixoto

T10-13B**The effect of lipopolysaccharide induced maternal inflammation on the cytoarchitectural development on the amygdala and hippocampus**

E. O'Loughlin, K. McDermott

T10-14B**Neuroimmunological changes in the neurodegeneration caused by cystatin B deficiency (progressive myoclonus epilepsy)**

O. Okuneva, Z. Li, I. Körber, L. Tian, T. Joensuu, A.-E. Lehesjoki, O. Kopr

T10-15B**Microglial cell activation by lipopolysaccharide does not induce neurotoxicity in organotypic hippocampal slice cultures**

I. Papageorgiou, J. Scheffel, U.-K. Hanisch, O. Kann



THE CENTER FOR STROKE RESEARCH BERLIN

The Center for Stroke Research Berlin (CSB) at the Charité - Universitätsmedizin Berlin has been funded since July 2008 by the Federal Ministry of Education and Research as an Integrated Research and Treatment Center (IFB).

A dozen CSB research groups perform disease-oriented basic research, clinical research, epidemiology and health services research related to stroke. The approach to stroke is interdisciplinary, with neurologists, neurosurgeons, immunologists, cardiologists, radiologists, and epidemiologists actively cooperating. In its second funding period, starting in June 2013, the CSB will focus on three areas: Protect Brain – Prevent Complication – Restore Function.

Internal structures have been established by the CSB to further research and improve research conditions: the trial team module, which supports clinical studies; the experimental lab module, which holds resources for basic research; the training module including the extra-occupational Master of Science in Cerebrovascular Medicine degree program; and the health care module, comprising IT and health care projects.

Also participating in the CSB are the Max Delbrück Center for Molecular Medicine Berlin-Buch (MDC) and the Medical Park AG. Within the Charité itself, several hospitals and institutes are engaged in the CSB.

The Berlin Stroke Alliance is a consortium of more than 50 institutions involved in the acute phase, rehabilitation and aftercare of stroke patients. It was initiated by the CSB to provide comprehensive treatment and care as a coordinated care chain. With respect to clinical research, this care chain offers a basis for early recruitment of study participants, continuous aftercare and long-term studies. Research in stroke prevention, acute treatment, rehabilitation and care are carried out in cooperation with the respective members of the Berlin Stroke Alliance.

For more information about the CSB, please visit www.strokecenter.de

T10-16B**Continuous vs bolus exposure of microglial cells to hydrogen peroxide**

P. Pathipati, S. Mueller, X. Jiang, D. Ferriero

T10-17B**Do stressed oligodendrocytes trigger microglia activation in pre-active MS lesions?**

L. Peferoen, D. Vogel, M. Breur, W. Gerritsen, C. Dijkstra, S. Amor

T10-18B**CD300f immunoreceptor is a novel neuron-glia interaction molecule with a neuroprotective role after acute brain injuries**

E. Taranto, D. Alí-Ruiz, D. Blanco, D. Tejera, A. Ejarque-Ortíz, L. Reyes, E. Comas-Casellas, M. Negro, A. Martínez-Barriocanal, N. Lago, P. Oliver, J. Sayós, H. Peluffo

T10-19B**Opposing roles of nitric oxide and interleukin-10 on CXCL12 gene expression in astrocytes**

F. Petkovic, J. Blazeovski, M. Momcilovic, M. Mostarica Stojkovic, D. Miljkovic

T10-20B**ICG-001, but not Aspirin promotes myelin gene expression in oligodendrocytes**

A. Preisner, J. Lilienbeck, A. Lürbke, E. Hoffmann, C. Kemming, T. Kuhlmann

T10-21B**Chemokine signalling in hippocampal lesions of multiple sclerosis patients**

M. Prins, R. Dutta, B. Trapp, E. de Vries, L. Janssens, B. Drukarch, A.-M. van Dam

T10-22B**Role of microglia activation in neurogenic hypertension**

M. Santisteban, J. Zubcevic, S. Kim, J.Y. Jun, P. Shi, E. Scott, C. Sumners, M. Raizada

T10-23B**Priming of microglia as response to neuronal dysfunction in a DNA repair deficient model of accelerated aging**

D. Raj, D. Jaarsma, M. Olah, F. Ferreira, I. Holtman, W. Schaafsma, N. Brouwer, M. Meijer, M. de Waard, I. van der Pluijm, R. Brandt, K. Kreft, J. Laman, B. Dykstra, G. de Haan, B. Eggen, K. Biber, J. Hoeijmakers, H. Boddeke

T10-24B**Phoneutria nigriventer spider venom activates astrocytes and microglia through sGC-cGMP inhibition**

C. Raposo, J. Sant'Ana, W.F. Cunha, A.K. Santana Nunes, C. Alves Peixoto, M.A. da Cruz-Höfling

T10-25B**In vivo imaging of astrocytes activation in rat hippocampus as a biomarker of epilepsy using ¹H-magnetic resonance spectroscopy**

T. Ravizza, A. Frasca, E. Micotti, M. Filibian, A. Vezzani

T10-26B**IL-10 induces changes in microglial reactivity following perforant pathway transection in GFAP IL-10Tg mice**

M. Recasens, B. Almolda, C. de Labra, I. Barrera, M.J. Hofer, I.L. Campbell, B. Gonzalez, B. Castellano

T10-27B**Interferon gamma protects mice from CNS autoimmunity also in the absence of IL-17A and IL-17F**

T. Regen, J. Huppert, N. Yogev, I. Prinz, A. Waisman

T10-28B**Immune response in rat neuron-glia co-cultures infected with *Neospora caninum*: role of oxide nitric synthetase inducible**

C.S. Ribeiro, M.D.F. Costa, A. Santos, M. Arruda, E. Jesus, G. Ferraz, A. Pinheiro, L. Jesus, S. Costa

T10-29B**Microglial activation in contralateral mice retina to experimental glaucoma**

B. Rojas, B.I. Gallego, J.J. Salazar, R. de Hoz, A.I. Ramírez, F.J. Valiente-Soriano, M. Avilés-Trigueros, J. Ramírez, A. Triviño

T10-30B**The mechanism of analgesia after minocycline administration in a rat model of neuropathic pain**

E. Rojewska, W. Makuch, B. Przewłocka, J. Mika

T10-31B**Epigenetic memory in microglia?**

W. Schaafsma

T10-32B**Differential regulation of the Wnt signaling pathway in experimental autoimmune encephalomyelitis**

R. Schneider, B. Bosch, F. Schröter, J. Ingwersen, C. Berndt, H.-P. Hartung, T. Prozorovski, O. Aktas

T10-33B**Development of an in vitro model to study the impact of iron in inflammatory demyelinating diseases**

C. Schuh, S. Hametner, I. Wimmer, M. Lindner, C. Elliott, M. Bradl, C. Lington, H. Lassmann

T10-34B**Inflammatory mediators increase expression of tissue Transglutaminase, but not Factor XIIIa, in primary human monocytes**

C. Sestito, N.L. Chrobok, J.J. Breve, S. van der Pol, H.E. de Vries, P.J. van den Elsen, M.M. Wilhelmus, B. Drukarch, A.-M. van Dam

T10-35B**TLR3 and-4 mediated fibronectin aggregation after demyelination impairs remyelination**

A.H. Sikkema, M.J. Vos, B. Mikus, P. de Boer, K. Dörenkämper, J.C. de Jonge, A. Nomden, D. Hoekstra, W. Baron

T10-36B**Temporal and regional pattern of expression of pro-inflammatory and anti-inflammatory genes in mouse experimental autoimmune encephalomyelitis**

T. Valente, G. Dentesano, U. Perpiñà, J. Saura, C. Solà

T10-37B**Expression of metabotropic glutamate receptor 4 (mGluR4) in glial cells and its involvement in oligodendrocyte survival**

S.F. Spampinato, S. Merlo, T. Sinagra, R. Calabrese, F. Nicoletti, M.A. Sortino

T10-38B**TGF β -mediated regulation of classical and alternative microglia activation states**

B. Spittau, X. Zhou, L. Wullkopf, J. Rilka, D. Pfeifer, K. Kriegstein

T10-39B**Presence of severe neuroinflammation does not intensify the extent of neurofibrillary degeneration**

W. Streit, Q.-S. Xue

T10-40B

Regulation of progranulin expression and modulation of progranulin by matrix metalloproteinase-12 (MMP-12) and secretory leukocyte protease inhibitor (SLPI) in human microglia

H.-S. Suh, N. Choi, S.C. Lee

T10-41B

A high fat diet exacerbates neuroinflammation by activation of the brain renin angiotensin system in experimental autoimmune encephalomyelitis

S. Timmermans, J. Bogie, T. Vanmierlo, P. Stinissen, N. Hellings, J. Hendriks

T10-42B

The phenotypes of microglia and macrophages during experimental autoimmune encephalomyelitis

I. Vainchtein, J. Vinet, N. Brouwer, B.J.L. Eggen, H.W.G. Boddeke

T10-43B

Seropositive and seronegative neuromyelitis optica differs in the inflammatory profile: an in vitro study on spinal cord glial cultures

T. Valente, L. Sabater, F. Mannara, F. Graus, J. Saura, A. Saiz

T10-44B

Targeted cell ablation reveals dynamics of immune responses to programmed cell death in the brain

T.J. van Ham, R. Kalicharan, J. Kuipers, B.N.G. Giepmans

T10-45B

Effects of astrocyte-targeted IL-6 or IL-10 production on neuronal survival and microglial activation after facial nerve axotomy

N. Villacampa, B. Almolda, M. Hopfer, J. Hidalgo, I. Campbell, B. González, B. Castellano

T10-46B

Macrophages in inflammatory multiple sclerosis lesions have an intermediate activation status

D. Vogel, E. Vereyken, J. Glim, P. Heijnen, M. Moeton, P. van der Valk, S. Amor, C. Teunissen, J. van Horssen, C. Dijkstra

T10-47B

Scavenger receptor A (SRA) in the induction of inflammatory activation of microglia and astrocytes: its relevance for Alzheimer's disease

R. von Bernhardi, F. Cornejo, G. Ramirez, J. Eugenin

T10-48B**Impact of the Immuno-proteasome on the pathogenesis of Alzheimer's and Parkinson's disease**

L. Wagner, R. Verma, S. Prokop, E. Krüger, P.M. Kloetzel, F.L. Heppner

T10-49B**Cell types derived from CD34+ stem cells show diverging phenotypes in X-linked adrenoleukodystrophy**

F.D. Weber, C. Wiesinger, S. Forss-Petter, G. Regelsberger, H. Stockinger, J. Berger

T10-50B**Interleukin-33 in brain development and traumatic brain injury**

G. Wicher, U. Wallenquist, M. Enoksson, B. Fuchs, E. Husic, L. Hillered, G. Nilsson, K. Forsberg-Nilsson

T10-51B**Molecular mechanisms driving tissue damage in multiple sclerosis**

I. Wimmer, M.T. Fischer, R. Höftberger, S. Gerlach, L. Haider, T. Zrzavy, S. Hametner, D. Mahad, C.J. Binder, J. Bauer, M. Bradl, H. Lassmann

T10-52B**Antigen-presenting cells in the central nervous system in EAE**

A. Włodarczyk, M. Løbner, O. Cédile, T. Owens

T10-53B**Glutamate receptors in EAE and microglia activation**

S. Wörtge, J. Huppert, S. Lacher, J. Bruttger, F. Kurschus, K. Karram, T. Regen, C. Kuhlmann, H. Luhmann, A. Waisman

T10-54B**Inhibition of EGFR/MAPK signaling reduces microglial inflammatory response and the associated secondary damage in rats after spinal cord injury**

Z. Yu, W. Qu

T10-55B**The leukocytes influx is modified by genetic background in Alzheimer's disease rat models**

N. Zilka, Z. Kazmerova, M. Zilkova, P. Neradil, M. Novak

T10-56B**Doxepin and fluoxetine influence neuropathic pain in rats and modulate microglia and astroglia cell activation**

M. Zychowska, W. Makuch, E. Rojewska, K. Popiolek-Barczyk, J. Mika, B. Przewlocka

T10-57B**Netrins enhance blood-brain barrier function and regulate immune responses at the blood-brain barrier**

C. Podjaski, J. Bin, N. Lebeurrier, S. Terouz, L. Bourbonniere, S. Larouche, M. Blain, C. Larochelle, L.H. Hachehouche, M. Sabbagh, A. Nakano, J.I. Alvarez, P. Gris, P. Darlington, J.P. Antel, T.E. Kennedy, A. Prat

T10-58B**MMP-independent role of TIMP-1 in regulating CD4 T cell migration across the glia limitans during viral encephalomyelitis**

C. Savarin, C. Bergmann, D. Hinton, S. Stohlman

T11 NEUROVASCULAR INTERACTIONS**T11-01B****Cerebral cortical blood flow response to brief basal forebrain stimulation**

N. Takata, T. Nagai, K. Ozawa, K. Mikoshiba, H. Hirase

T11-02B**The 'double settlement' of the perivascular glia – changes during the radial glia/astrocytes replacement. An immunohistochemical study in rats**

M. Kalman, K. Pocsai, Z. Bagyura, I. Adorjan

T11-03B**The oligodendrogenic activity of brain pericytes: a novel player during myelin repair?**

S. Lange, P. Rotheneichner, P. van Wijngaarden, G.A. Gonzalez, A. Guzman De La Fuente, C. Zhao, R.J.M. Franklin, L. Aigner, F.J. Rivera

T12 REGENERATION AND REPAIR

T12-01B

Embryonic stem cell-derived microglia and primary microglia display a similar transcriptome signature

B. Linnartz-Gerlach, C. Beutner, S. Schmidt, M. Beyer, M. Mallmann, A. Staratschek-Jox, J.L. Schultze, H. Neumann

T12-02B

Spinal cord injury: development of a novel in vitro model

M. McGrath, S.D. Boomkamp, S.C. Barnett, M. Riehle

T12-03B

Mobilization of progenitors in the subventricular zone to undergo oligodendrogenesis in the theiler's virus model of multiple sclerosis: implications for a remyelinating process in lesions sites

M. Mecha, A. Feliu, F.J. Carrillo-Salinas, C. Guaza

T12-04B

Galectin-1/NRP1 interaction via carbohydrate binding produces regenerative response and functional recovery after spinal cord injury by blocking the Semaphorine 3A pathway

L.A. Pasquini, H.R. Quinta, G.A. Rabinovich, J.M. Pasquini

T12-05B

High resolution microscopic analysis of the peripheral nerve regeneration using double/triple fluorescent transgenic mice

L. Politti Cartarozzi, A. Cupido, R.G. Zanon, A. Scheller, A. Leite Rodrigues de Oliveira, F. Kirchhoff

T12-06B

Maldi imaging mass spectrometry: a novel technology for studying neurosciences

I. Fournier, J. Franck, F. Croq, D. Cizkova, C. Lefebvre, J. Vizioli, P.-E. Sautière, M. Salzert

T12-07B

Aligned Schwann cells derived from human dental pulp stem cells direct neurite growth in a tissue engineered collagen construct

K. Sanen, W. Martens, M. Georgiou, J. Phillips, I. Lambrichts, M. Ameloot

T12-08B**Regulation of astrocyte activation by the cleaved P75 neurotrophin receptor**

C. Schachtrup, J. Kyu Ryu, P.M. Carlton, N. Le Moan, A. Perez, E. Vagena, M.H. Ellisman, T. Wyss-Coray, K. Akassoglou

T12-09B**Reactive glia acquire stem cell properties in response to Sonic hedgehog in the injured brain**

S. Sirko, G. Behrendt, P. Johansson, N. Plesnila, K. Grobe, L. Dimou, M. Götz

T12-10B**Oncostatin M reduces lesion size and promotes functional recovery after spinal cord injury**

H. Slaets, S. Nelissen, K. Janssens, P.-M. Vidal, S. Hendrix, N. Hellings

T12-11B**EphrinB3 antibody accelerates CNS remyelination following toxin-induced demyelination**

Y.A. Syed, M. Hofer, G. Gonzalez, K. Armin Nave, M. Kotter

T12-12B**Profiling of aquaporin 4 knockout astrocytes regarding tight junction protein expression**

G. Szabó

T12-13B**Enhancement of stem cell integration into the retina by modulating glial reactivity in an in-vitro stem cell transplantation model**

A. Tassoni, N. Bull, K. Martin

T12-14B**Netrin-1 and central nervous system remyelination**

V. Tepavcevic, M.-S. Aigrot, C. Kerninon, E. Meppiel, S. Mozafari, R. Arnauld-Laurent, C. Ross, P. Ravassard, T. Kennedy, B. Nait Oumesmar, C. Lubetzki

T12-15B**Human platelet derived growth factor responsive neural precursors (PRPs) differentiate into mature oligodendrocytes and produce myelin when transplanted into the injured rat spinal cord**

G.J. Duncan, A. Chojnacki, J.R. Plemel, P. Assinck, A. Samiei, J. Kim, Y. Jiang, J. Liu, S. Weiss, W. Tetzlaff

T12-16B**Optimization of iPS-cell based remyelination cell therapy in a nonhuman primate model for multiple sclerosis (MS)**

A. Thiruvalluvan, M. Czepiel, J. Boertien, B. A. 't Hart, Y. Kap, E. Boddeke, S. Copray

T12-17B**Vascular niche provides unique microenvironment for oligodendrocyte precursor cells differentiation during CNS remyelination**

J. Ulanska-Poutanen, J. Mieczkowski, B. Kaminska, C. Zhao, R.J.M. Franklin, M. Zawadzka

T12-18B**New insights into the reaction of mouse oligodendrocyte progenitor cells after brain injury by live in vivo imaging**

A. von Streitberg, C. Straube, M. Götz, L. Dimou

T12-19B**Low-dose-fractionated X-irradiation attenuates astrogliosis-mediated inhibition of axonal regeneration and facilitates recovery of motor function after spinal cord hemi-section in Beagle dogs**

W. Wang, Q. Zhang

T12-20B**Investigation of de- and remyelination of toxin-induced lesions in the adult zebrafish optic nerve**

J. Muenzel, C. Becker, T. Becker, A. Williams

T12-21B**Novel interactions between the c-Jun and Notch signalling pathways regulate the Schwann cell response to peripheral nerve injury**

D. Wilton, K. Malgapo, C. Benito, C. Gomis, J. Shen, D. Meijer, L. Feltri, L. Wrabetz, A. Behrens, R. Mirsky, K. Jessen

T12-22B**Hematopoietic stem/progenitor cell-derived microglia-like cells with potential to support regeneration in the central nervous system**

B. Wylot, K. Konarzewska, M. Zawadzka

T12-23B**Schwann cell c-Jun is essential for successful peripheral nerve regeneration**

R. Mirsky, P. Arthur-Farraj, M. Latouche, D. Wilton, S. Quintes, E. Chabrol, A. Woodhoo, B. Jenkins, M. Turmaine, A. Behrens, G. Raivich, K. Jessen

T13 TRANSMITTER RECEPTORS, ION CHANNELS AND GAP JUNCTIONS**T13-01B****Functional role of potassium channels in oligodendroglial lineage cells**

S. Korr, P. Ehling, S. Albrecht, T. Kuhlmann

T13-02B**Selective permeation pathway through connexin 43 hemichannels**

D. Bloch Hansen, J. Pauli Hofgaard, T. Hartig Braunstein, M. Schak Nielsen, N. MacAulay

T13-03B**Ca²⁺ permeable AMPA receptors are coupled to vesicular glutamate release from Bergmann glia processes**

M. Marcoli, C. Cervetto, M. Passalacqua, S. Alloisio, M. Nobile, D. Frattaroli, G. Maura

T13-04B**The subpopulation of microglia expressing functional muscarinic acetylcholine receptors expands in stroke and Alzheimer's disease**

M. Pannell, F. Szulzewsky, V. Matyash, M. Endres, F. Heppner, G. Kronenberg, V. Prinz, S. Prokop, S. Waiczies, S.A. Wolf, H. Kettenmann

T13-05B**Expression of Kir7.1 in glia; potential glioprotective qualities**

M. Papanikolaou, A. Lewis, A.M. Butt

T13-06B**Molecular and functional characteristics of GABA_A receptors in NG2 cells of the hippocampus**

S. Passlick, M. Grauer, C. Schäfer, R. Jabs, G. Seifert, C. Steinhäuser

T13-07B**Differential regulation of acid-base transporters in glial cells following extracellular pH changes**

M. Schroedl, E. Roussa

T13-08B**ATP released through connexin43 hemichannels mediates secondary cellular damage spread from the trauma zone to distal zones in astrocyte monolayers**

M. Rovegno, P.A. Soto, P.J. Saéz, C. Naus, J.C. Saéz, R. von Bernhardt

T13-09B**Analysis of GABA_B receptor deletion in mouse astrocytes**

L. Schlosser, A. Scheller, F. Kirchhoff

T13-10B**Microglia in the embryonic cortex – mature team players or young bench sitters?**

N. Swinnen, S. Smolders, B. Brône, P. Legendre, J.-M. Rigo

T13-11B**High bicarbonate sensitivity of mouse cortical astrocytes mediated by sodium-bicarbonate cotransporter NBCe1: a novel bicarbonate sensor?**

S.M. Theparambil, I. Ruminot, J.W. Deitmer

T13-12B**The role of L-type calcium channels subtypes 1.2 and 1.3 in NG2 glia**

N. Zhao, W. Huang, A. Scheller, F. Kirchhoff

T13-13B**Panx1 form Ca²⁺ permeable membrane hemichannels essential for amyloid b peptide-induced mast cells degranulation**

P.A. Harcha, A.A. Vargas, J.C. Sáez

T14 TUMORS**T14-01B****Migration of glioblastoma cells is modulated by KCa3.1 channel activity**

A. Grimaldi, G. D'Alessandro, C. Lauro, M. Catalano, C. Limatola

T14-02B**Toll-like-receptor 2 mediates microglia/brain macrophage MT1-MMP expression and glioma expansion**

F. Hu, K. Vinnakota, M.-C. Ku, P. Georgieva, F. Szulzewsky, S. Lehnardt, U.-K. Hanisch, M. Synowitz, D. Markovic, R. Glass, S. Wolf, H. Kettenmann

T14-03B**Dissecting the role of apelin signaling in gliomagenesis**

R.E. Kälin, A. Jarczewski, F. Apel, R. Monk, S. Kraft, J. Radke, F.L. Heppner

T14-04B**Siglec-h on M1-polarized microglia triggers uptake of cells with an altered glycocalyx**

J. Kopatz, C. Beutner, J. Ackermann, H. Neumann, H. Neumann

T14-05B**Glioblastoma a fatal tumour with stem cells**

V. Moura-Neto

T14-06B**LIM domain kinases as therapeutic targets for neurofibromatosis type 2**

A. Petrilli, A. Copik, M. Posadas, L.-S. Chang, D.B. Welling, M. Giovannini, C. Fernandez-Valle

T14-07B**Carcinoma cells misuse the host tissue danger response to invade the brain**

H.-N. Chuang, D.V. vanRossum, D. Sieger, L. Siam, F. Klemm, A. Bleckmann, M. Bayerlová, B. Wenske, K. Farhat, J. Scheffel, M. Schulz, F. Dehghani, C. Stadelmann, U.-K. Hanisch, C. Binder, T. Pukrop

T14-08B**A vascularisation switch induced by Notch pathway activation in glioblastoma stem-like cells**

P.-O. Guichet, M. Teigell, L. Hopp, B. Rothhut, J.-P. Hugnot

T15 LATE POSTER SESSION**T15-01B****Serotonin and axonal refinement during development: new players?**

M. Kolodziejczak, A. Rebsam, L. Maroteaux, A. Roumier

T15-02B**Identification and quantification of proteins in tissue sections and laser capture microdissected astrocytes by matrix assisted laser desorption ionization mass spectrometry imaging (MALDI-MSI)**

R. Waller, P.R. Heath, M.N. Woodroffe, S. Francese, S.B. Wharton, P.G. Ince, N.P. Rounding, B. Sharrack*, J.E. Simpson* * Joint senior authors

T15-03B**Antagonistic interaction between adenosine A_{2A} receptors and Na⁺/K⁺-ATPase- α_2 : implications for astrocyte glutamate uptake**

M. Matos, E. Augusto, M.A. Schwarzschild, P. Agostinho, R.A. Cunha, J.-F. Chen

T15-04B**Study on the possible association between infarct development and microglial activation with behavioural deficits after permanent middle cerebral artery occlusion in mice**

Y. Couch, B. H. Clausen, N. Al Eisa, B. Finsen, D. C. Anthony, K. L. Lambertsen

T15-05B**Altered calcium kinetics and mitochondrial oxidative stress in psychosine induced cell death: implications for globoid cell leucodystrophy**

V. Voccoli, I. Tonazzini, C. Cerri, M. Allegra, M. Caleo, M. Cecchini

T15-06B**PI3K γ regulates MMP expression in microglial cells by control of cAMP dependent signaling**

A. Frister, C. Schmidt, N. Schneble, R. Bauer, R. Wetzker

T15-07B**Role of cannabinoid 1 receptors on hippocampal gabaergic neurons in brain aging**

Ö. Albayram, J. Alferink, A. Piyanova, K. Monory, B. Lutz, A. Zimmer, A. Bilkei-Gorzo

T15-08B**In vivo characterization of the role of transcription factor Sox4 in Schwann cell myelination**

L. Bartesaghi, E. Arnaud, J.-J. Médard, R. Chrast

T15-09B**CREB regulates calcium excitability in astrocytes**

E. Vicario, R. Villalonga, A. Voltes, L. Pardo, E. Galea, R. Masgrau

NeuroCure is a Cluster of Excellence in the neurosciences at the Charité – Universitätsmedizin Berlin established within the Excellence Initiative of the German federal and state governments. This interdisciplinary consortium consists of six partner institutions including the Charité, Humboldt-Universität zu Berlin, Freie Universität Berlin, Max Delbrück Center for Molecular Medicine (MDC), Leibniz Institute for Molecular Pharmacology (FMP) and Deutsches Rheuma-Forschungszentrum Berlin (DRFZ).

Structural goals of the Cluster include strengthening Berlin as a neuroscience research location; establishing neuroscience professorships and junior research groups with the Berlin universities and research institutions; extending the research network of the partner institutions; and expanding scientific and clinical infrastructures as well as technological platforms.

NeuroCure research addresses the problem that diseases of the nervous system can, in many cases, be treated but not cured. They have high rates of mortality, morbidity and disease-related costs, and will increase with the demographic shift towards an aging population. New insights into the function of the nervous system and better understanding of disease mechanisms are necessary to develop effective and potentially curative therapies and improved diagnostics.

The Cluster's overall aims include the transfer of knowledge from basic science to clinical application (translation); increasing understanding of disease mechanisms underlying different neurological diseases; and developing effective therapies and new diagnostic approaches for diseases such as stroke, multiple sclerosis, Alzheimer's disease and developmental disturbances of the central nervous system.

The NeuroCure Clinical Research Center (NCRC) - an outpatient unit situated on the Charité Campus Mitte - was established as an interface between basic science and clinical research to enable the rapid translation of scientific insights to clinical application, and allow greater patient access to new therapies and diagnostic options.

For more information, see www.neurocure.de

Map of Berlin subway and commuter railway system





Station for the Estrel Hotel Berlin

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Program at a glance

	Tuesday, July 2	Wednesday, July 3	Thursday, July 4	Friday, July 5	Saturday, July 6
08:00-09:00					
09:00-10:00	Introductory Course p.16	Workshops p.18	Plenary Lecture (P2) p.24	Plenary Lecture (P4) p.30	Plenary Lecture (P6) p.36
10:15-11:15			Coffee Break	Coffee Break	Coffee Break
11:15-12:15			Symposia II p.24	Symposia IV p.30	Symposia VI p.36
12:15-13:00			Lunch Break	Lunch Break	Lunch Break
13:15-14:15	Therapeutic strategies for leuko-dystrophies: outcomes & perspectives p.17		Poster session I p.42	Poster session II p.80	Poster session II p.80
14:15-15:15		Opening Lecture (P1) p.20			
15:15-16:15		Symposia I p.20	Symposia III p.26	Symposia V p.32	Plenary Lecture (P7) p.38
16:15-17:15					
17:15-17:30					
17:30-18:30		Poster session I + Coffee Break p.42	Coffee Break	Coffee Break	
18:30-19:00			Plenary Lecture (P3) p.29	Plenary Lecture (P5) p.35	
19:00-20:00					
20:00		Opening Reception			

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on Glial Cells in Health and Disease
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**Deadline for Symposium Proposals:
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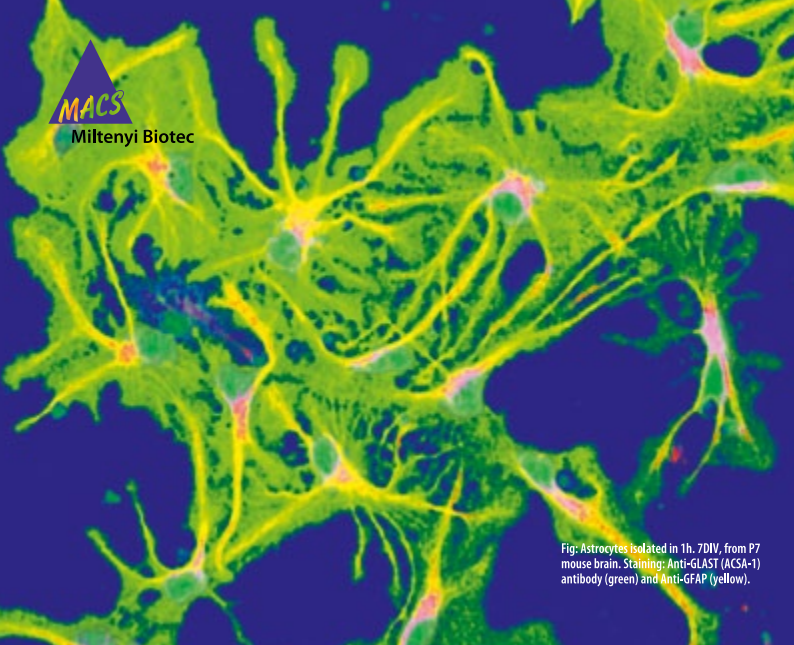


Fig: Astrocytes isolated in 1h, 7DIV, from P7 mouse brain. Staining: Anti-GLAST (ACSA-1) antibody (green) and Anti-GFAP (yellow).

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