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THE FIFTEENTH EIBSEE MEETING ON

CELLULAR MECHANISMS OF NEURODEGENERATION

October 28-30, 2015

key note speaker:
T. Golde (University of Florida, Gainesville)

guest speakers:
A. Boxer (University of California, San Francisco)
O. Butovsky (Harvard Medical School, Boston)
A. Gram-Hanssen (University of Copenhagen)
L. Kasper (Dartmouth College, Hanover)
C. Lemere (Harvard Medical School, Boston)
G. Mallucci (University of Cambridge)
V. Nägerl (University of Bordeaux)
K.-A. Nave (MPI for Experimental Medicine, Göttingen)
M. Nelson (University of Vermont, Burlington)
F. Quintana (Harvard Medical School, Boston)
L. Sun (Tsinghua University, Beijing)
R. Vassar (Northwestern University, Chicago)

organized by:
C. Haass (DZNE & University of Munich)

national speakers:
M.A. Busche, A. Ertürk, M. Heneka, P. Heutink,
V. Hornung, N. Kawakami, G. Kleinberger,
S. Lichtenhaler, A. Liesz, A. Ludolph, B. Pichler,
M. Prinz, H. Steiner, K. Strecker, M. Suarez-Calvet
The fifteenth Eibsee Meeting
(October 28-30, 2015)

CELLULAR MECHANISMS OF
NEURODEGENERATION

funded by the

DZNE, German Center of Neurodegenerative Diseases - Munich

The Hans und Ilse Breuer Foundation

SyNergy, Munich Cluster for Systems Neurology

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organized by:

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**Location**

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**Travelling**

**by train:** take the train to Garmisch (via Munich). In Garmisch please take a taxi to the hotel (about 15-20 min drive).

**by plane:** from Munich airport take the S-Bahn to Munich Central station. At the central station take the train to Garmisch (about 1 hr); from here take a taxi to the hotel.

**by car:** from Munich take the highway to Garmisch. In Garmisch follow the signs to Eibsee. The hotel is at the end of the road right at the foot of the Zugspitze.

**Weather**

It is fall and it may be cold already. For those who like to go on a walk: please bring your hiking boots.

**Acknowledgements**

We greatly appreciate funding of the Eibsee Meeting by the Hans and Ilse Breuer Foundation, the German Center for Neurodegenerative Diseases (DZNE) and SyNergy, Munich Cluster for Systems Neurology. We thank our additional sponsors F. Hoffmann-La Roche and Quanterix for their generous financial support.
Wednesday, October 28

Arrival, Hiking, Opening Lecture

12:30 The traditional “scientific walk” around the lake (if weather permits)

15:00 – 15:15 Welcome (C. Haass)

15:15 – 16:00 Key Note Lecture
Todd E. Golde, Center for Translational Research in Neurodegenerative Disease, University of Florida, Gainesville, USA
The challenge and promise of harnessing immunoproteostasis to treat neurodegenerative disorders

16:00 – 16:40 Coffee Break / Poster Session

16:40 – 18:15 Neuroinflammation and innate immunity
Chair: Jörg Schulz

Guest speakers
16:40 – 17:05 Oleg Butovsky, Harvard Medical School, Boston, USA
Microglia mediated neurodegeneration is driven by TREM2-APOE pathway

17:05 – 17:30 Cynthia A. Lemere, Harvard Medical School, Boston, USA
Complement as a therapeutic target in AD: lessons from C3-deficient mice

Short talks
17:30 – 17:45 Veit Hornung, University of Munich, Germany
How LPS triggers inflammation - new insights into old questions

17:45 – 18:00 Michael Heneka, DZNE & University Hospital, Bonn, Germany
Innate immune activity in Alzheimer’s disease

18:00 – 18:15 Gernot Kleinberger, University of Munich, Germany
Cellular and animal models of TREM2 deficiency

18:45 Cocktails

19:30 Dinner

Thursday, October 29

9:00 – 10:45 Secretases and amyloid
Chair: Irene Knuesel

Guest speakers
9:00 – 9:25 Robert J. Vassar, Northwestern University, Chicago, USA
BACE1 in Alzheimer’s disease

9:25 – 9:50 Linfeng Sun, Tsinghua University, Beijing, China
Structural and functional insights into the human gamma secretase complex

9:50 – 10:15 Giovanna Mallucci, University of Cambridge, UK
Targeting the UPR to prevent neurodegenerative disease

Short talks
10:15 – 10:30 Stefan Lichtenthaler, DZNE & Technical University of Munich, Germany
Function and signaling of DR6 in the peripheral nervous system

10:30 – 10:45 Harald Steiner, University of Munich, Germany
Intramembrane proteolysis by Alzheimer’s disease gamma-secretase

10:45 – 11:25 Coffee Break
11:25 – 12:05  Microbiome and antimicrobial activity of amyloid-β-peptide  
Chair: Reinhard Hohlfeld  
Guest speakers  
11:25 – 11:50 Lloyd H. Kasper, Dartmouth College, Hanover, USA  
The gut–brain CD39+ T regulatory cell axis: Role of the microbiota and gut associated lymphoid tissue in regulating inflammatory CNS demyelination  
Short talk  
11:50 – 12:05 Arthur Liesz, University of Munich, Germany  
The brain-microbiota-immune axis in acute brain injury  
Flash talks I (Poster presentations)  
Chair: Christian Haass  
12:05 – 12:15 Five two minute talks with one slide (selected from poster abstracts)  

12:30 – 14:00 Lunch  
14:00 – 15:00 Time for Recreation  

15:00 – 16:05 Glia  
Chair: Nikolaus Plesnila  
Guest speakers  
15:00 – 15:25 Francisco J. Quintana, Harvard Medical School, Boston, USA  
Regulation of CNS inflammation by astrocytes  
15:25 – 15:50 Klaus-Armin Nave, Max Planck Institute for Experimental Medicine, Göttingen, Germany  
New functions of oligodendrocytes in axonal metabolic support and brain ageing  
Short talk  
15:50 – 16:05 Marco Prinz, University Hospital Freiburg, Germany  
Regulators of microglia homeostasis  
Flash talks II (Poster presentations)  
Chair: Christian Haass  
16:05 – 16:15 Five two minute talks with one slide (selected from poster abstracts)  

16:15 – 16:55 Coffee Break  

16:55 – 18:15 Vascular dysfunction  
Chair: Martin Dichgans  
Guest speakers  
16:55 – 17:20 Anders Gram-Hanssen, University of Copenhagen, Denmark  
Control of microvascular perfusion and its dysregulation in small vessel disease  
17:20 – 17:45 Mark T. Nelson, University of Vermont, Burlington, USA  
Potassium channelopathy-like defect underlies early-stage cerebrovascular dysfunction in small vessel disease  
Short talk  
17:45 – 18:00 Bernd Pichler, University of Tübingen, Germany  
Longitudinal PET-MRI reveals β-amyloid deposition and rCBF dynamics and connects vascular amyloidosis to quantitative loss of perfusion  
18:00 – 18:15 Katrin Strecker, DZNE Munich, Germany  
Linking neurodegeneration to vascular dysfunction: Loss of TDP-43 causes angiogenic defects  

18:30 Dinner  

20:30 Poster Session with Drinks
Friday, October 30

9:00 – 10:10 Translation
Chair: Günther Höglinger
Guest speakers
9:00 – 9:25 Adam Boxer, University of California, San Francisco, USA
Clinical development of FTLD therapeutics
9:25 – 9:40 Peter Heutink, DZNE Tübingen, Germany
High-throughput functional validation of Parkinson’s disease exome sequencing data
9:40 – 9:55 Albert C. Ludolph, University Hospital Ulm, Germany
Rodent models for ALS and FTD - Challenges
9:55 – 10:10 Marc Suarez-Calvet, University of Munich, Germany
CSF soluble TREM2 (sTREM2) in autosomal dominant Alzheimer's disease: the DIAN project

10:10 – 10:50 Coffee Break

10:50 – 12:00 Novel Imaging Techniques
Chair: Thomas Misgeld
Guest speakers
10:50 – 11:15 Valentin Nägerl, University of Bordeaux, France
Superresolution imaging of neural structure and function
11:15 – 11:30 Naoto Kawakami, University Hospital Munich, Germany
In vivo imaging of CNS inflammation
11:30 – 11:45 Ali Ertürk, University of Munich, Germany
Seeing the big picture: Tissue clearing and high resolution light-sheet microscopy imaging of intact biological specimens
11:45 – 12:00 Marc Aurel Busche, Technical University of Munich, Germany
Mechanisms of long-range circuit dysfunction in mouse models of Alzheimer’s disease

12:15 Lunch
Departure

19:00 Dinner
for Participants staying until Saturday, October 31