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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)

national speakers:

M.A. Busche, A. Ertürk, M. Heneka, P. Heutink,
V. Hornung, N. Kawakami, G. Kleinberger,
S. Lichtenthaler, A. Liesz, A. Ludolph, B. Pichler,
M. Prinz, H. Steiner, K. Strecker, M. Suarez-Calvet

organized by:

C. Haass (DZNE & University of Munich)

Hans und Ilse
**Breuer
Stiftung**
ALZHEIMER
FORSCHUNG UND HILFE



DZNE
Deutsches Zentrum für
Neurodegenerative Erkrankungen
in der Helmholtz-Gemeinschaft



SyNerg
Munich Cluster for
Systems Neurology



Deutsche
Forschungsgemeinschaft

DFG

**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

organized by:

Christian Haass

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Location



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.



PROGRAM

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

Short talks

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

Short talks

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