

# 16

THE SIXTEENTH EIBSEE MEETING ON

## CELLULAR MECHANISMS OF NEURODEGENERATION

October 26-28, 2016

*key note speakers:*

D. Attwell (University College London)  
M. Diamond (UT Southwestern Medical Center, Dallas)

*guest speakers:*

S. Alberti (MPI of Molecular Cell Biology and Genetics, Dresden)  
B. Bohrmann (Roche Innovation Center, Basel)  
G. Bu (Mayo Clinic, Jacksonville)  
J. Cirrito (Washington University, St. Louis)  
N. Fawzi (Brown University, Providence)  
C. ffrench-Constant (University of Edinburgh)  
F.-B. Gao (University of Massachusetts, Worcester)  
S. Hong (Harvard Medical School, Boston)  
C. Lagier-Tourenne (Harvard Medical School, Boston)  
A. Lloyd (University College, London)  
T. Murphy (University of British Columbia, Vancouver)  
R. Nitsch (University of Zurich)  
S. Sisodia (University of Chicago)  
P. St. George-Hyslop (University of Toronto)  
D. Valenzano (MPI for Biology of Ageing, Cologne)

*national speakers:*

D. Dormann, J. Dreier, D. Edbauer,  
M. Götz, C. Haass, M. Heneka,  
A. Hermann, V. Hornung, N. Plesnila,  
M. Simons, M. Zweckstetter

*organized by:*

C. Haass (DZNE & University of Munich)



Deutsche  
Forschungsgemeinschaft



**The sixteenth Eibsee Meeting  
(October 26-28, 2016)**

**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 sponsor F. Hoffmann-La Roche for his generous financial support.



# PROGRAM

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## Wednesday, October 26

Arrival, Hiking, Opening Lecture

12:00 The traditional “scientific walk” around the lake (if weather permits)

**15:00 – 15:15 Welcome** (Christian Haass)

**15:15 – 16:00 Key Note Lecture**

David Attwell, University College London, UK

Control of brain blood flow by capillary pericytes in health and disease

**16:00 – 16:45 Key Note Lecture**

Marc Diamond, University of Texas, Southwestern Medical Center, Dallas, USA

Tau Strains: A unifying logic for the diversity of dementias

*16:45 – 17:25 Coffee Break / Poster Session*

**17:25 – 18:40 Translation**

*Chair:*

**Guest speaker**

17:25 – 17:50 John Cirrito, Washington University, St. Louis, USA

Serotonergic regulation of Abeta production in mice and men

17:50 – 18:15 Roger Nitsch, University of Zurich, Switzerland

Aducanumab for the treatment of Alzheimer's Disease

18:15 – 18:40 Bernd Bohrmann, Roche Innovation Center, Basel, Switzerland

Abeta Immunotherapy: Novel strategies for treatment in Alzheimer's Disease

**18:40 – 18:50 Announcement of the Hans & Ilse Breuer Award 2016** (Christian Haass)

*19:00 Cocktails*

*19:30 Dinner*

## Thursday, October 27

**9:00 – 10:45 Phase separation and protein aggregation**

*Chair:*

**Guest speakers**

9:00 – 9:25 Peter St. George-Hyslop, University of Toronto, Canada, and University of Cambridge, UK  
To be determined

9:25 – 9:50 Simon Alberti, Max Planck Institute of Molecular Cell Biology and Genetics, Dresden, Germany  
RNP granules: how the form, age and cause disease

9:50 – 10:15 Nicolas L. Fawzi, Brown University, Providence, USA  
Structural details of disordered protein granule formation and aggregation associated with neurodegenerative diseases

**Short talks**

10:15 – 10:30 Markus Zweckstetter, DZNE & Max Planck Institute for Biophysical Chemistry, Göttingen, Germany  
NMR spectroscopy provides high-resolution insights into critical processes of the degenerating brain

10:30 – 10:45 Dorothee Dormann, University of Munich, Germany  
Molecular mechanisms of FUS aggregation

*10:45 – 11:25 Coffee Break*

**11:25 – 12:35    Micoglia and immunity**

*Chair:*

**Guest speaker**

11:25 – 11:50    Soyon Hong, Boston Children´s Hospital, Harvard Medical School, USA  
Microglia-mediated synapse loss in Alzheimer´s disease

**Short talks**

11:50 – 12:05    Veit Hornung, University of Munich, Germany  
Mouse is not man – inflammasome signaling in the human system

12:20 – 12:35    Michael Heneka, University Hospital & DZNE Bonn, Germany  
The beginning of the end - how microglia contribute to disease progression in Alzheimer´s disease

**Flash talks I (poster presentations)**

*Chair: Christian Haass*

12:35 – 12:45    Five two minute talks with one slide from abstract submissions of SyNergy and DZNE young investigators

*13:00 – 14:00 Lunch*

*14:00 – 15:00 Time for Recreation*

**15:00 – 16:30    Risk factors for neurodegeneration**

*Chair:*

**Guest speakers**

15:00 – 15:25    Dario Valenzano, Max Planck Institute for Biology of Ageing, Cologne, Germany  
The short-lived turquoise killifish sheds light on the basis of vertebrate ageing

15:25 – 15:50    Sangram S. Sisodia, University of Chicago, USA  
Modulation of amyloid deposition and neuroinflammation by the microbiome

15:50 – 16:15    Guojun Bu, Mayo Clinic, Jacksonville, USA  
ApoE and TREM2 in microglial function and neuroinflammation

**Short talk**

16:15 – 16:30    Christian Haass, DZNE & University of Munich, Germany  
TREM2

*16:30 – 17:10 Coffee Break*

**17:10 – 18:30    Regeneration**

*Chair:*

**Guest speaker**

17:10 – 17:35    Charles ffrench-Constant, University of Edinburgh, UK  
Intrinsic and extrinsic regulation of myelin formation and regeneration

17:35 – 18:00    Alison Lloyd, University College London, UK  
To be determined

**Short talks**

18:00 – 18:15    Magdalena Götz, University of Munich, Germany  
Replacing degenerated neurons by new adequately integrating neurons

18:15 – 18:30    Mikael Simons, Technical University & DZNE Munich, Germany  
Role of inflammation in myelin repair

**Flash talks II (Poster presentations)**

*Chair: Christian Haass*

18:30 – 18:40    Five two minute talks with one slide from abstract submissions of SyNergy and DZNE young investigators

*19:00 Dinner*

**20:30 Poster Session with Drinks**

## Friday, October 28

### 9:00 – 10:20 Repeat expansions and nuclear transport

*Chair:*

#### Guest speakers

9:00 – 9:25 Clotilde Lagier-Tourenne, Massachusetts General Hospital and Harvard Medical School, Boston, USA  
Modeling C9orf72 disease: a crucial step for therapeutic development in ALS/FTD

9:25 – 9:50 Fen-Biao Gao, University of Massachusetts Medical School, Worcester, USA  
Pathogenic mechanisms of C9ORF72-related ALS/FTD

#### Short talks

9:50 – 10:05 Dieter Edbauer, DZNE & University of Munich, Germany  
Role of TDP-43 in ALS/FTD and connection to DPR proteins

10:05 – 10:20 Andreas Hermann, University Hospital & DZNE Dresden, Germany  
Modelling neurodegeneration: from DNA damage to aggregate formation and axonal trafficking

*10:20 – 11:00 Coffee Break*

### 11:00 – 11:55 The brain in action – neuro-vascular function in vivo

*Chair:*

#### Guest speaker

11:00 – 11:25 Timothy H. Murphy, University of British Columbia, Vancouver, Canada  
High throughput automated imaging of mesoscopic functional connectivity in mouse cortex during health and disease

#### Short talks

11:25 – 11:40 Jens Dreier, Charité – University of Berlin, Germany  
Spreading depolarization threshold is reduced and spreading ischemia is prolonged in spontaneously hypertensive stroke-prone rats under Japanese diet

11:40 – 11:55 Nikolaus Plesnila, University Hospital Munich, Germany  
Periprotection - a new concept for the therapy of CADASIL?

*12:30 – 13:30 Lunch*

*Departure*

*19:00 Dinner for participants staying until Saturday, October 29*