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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 sponsors F. Hoffmann-La Roche and Quanterix for their generous financial support.



PROGRAM

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: Günter Höglinger

Guest speakers

17:25 – 17:50 John R. Cirrito, Washington University, St. Louis, USA
Serotonergic regulation of Abeta production in mice and men

17:50 – 18:15 Roger M. Nitsch, University of Zurich, Switzerland
Development of 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: Eckhard Mandelkow

Guest speakers

9:00 – 9:25 Peter St. George-Hyslop, University of Toronto, Canada, and University of Cambridge, UK
FUS phase transition: functional consequences

9:25 – 9:50 Simon Alberti, Max Planck Institute of Molecular Cell Biology and Genetics, Dresden, Germany
RNP granules: how they 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 – 12:20 Microglia and immunity

Chair: Mikael Simons

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

12:05 – 12:20 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

12:20 – 12:30 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: Jörg Schulz

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: from cellular mechanisms to human patients

16:30 – 17:10 Coffee Break

17:10 – 18:30 Regeneration

Chair: Martin Kerschensteiner

Guest speakers

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

17:35 – 18:00 Alison Lloyd, University College London, UK
The multicellular nature of peripheral nerve regeneration

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: Dorothee Dormann

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
TDP-43 regulates vesicle trafficking and trophic signaling in neurons
- 10:05 – 10:20 Andreas Hermann, Technische Universität & 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: Arthur Liesz

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