

12 Eibsee

THE TWELFTH EIBSEE MEETING ON

CELLULAR MECHANISMS OF NEURODEGENERATION

November 21-24, 2012

DZNE speakers:

F. Bradke, D. Edbauer, C. Haass,
M. Heneka, J. Herms, G. Höglinger,
M. Jucker, G. Kempermann, S. Lichtenthaler,
T. Misgeld, M. Neumann, J. Pahnke, G. Petzold,
B. Schmid, H. Steiner, J. Tatzelt, K. Winklhofer

guest speakers:

A. Abeliovich (Columbia University)
H.-U. Demuth (Probiodrug AG)
M. Dichgans (University of Munich)
P. Heutink (University of Amsterdam)
C. Hoogenraad (University of Utrecht)
M. Hübener (MPI of Neurobiology)
M. Kerschensteiner (University of Munich)
K.S. Kosik (University of California)
M. Polymenidou (University of California)
A. Quaegebeur (VIB, University of Leuven)
D. Rubinsztein (University of Cambridge)
M.G. Spillantini (University of Cambridge)
C. Van Broeckhoven (VIB, University of Antwerp)
H. Wekerle (MPI of Neurobiology)

organized by:

C. Haass (DZNE & University of Munich)



**The twelfth Eibsee Meeting
(November 21 - 24, 2012)**

**"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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Location

Eibsee Hotel

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The Eibsee Hotel at the foot of the Zugspitze



The Eibsee speakers and participants 2010

Travelling

by train: take the train to Garmisch (via Munich). In Garmisch please take a cab 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 cab 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

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PROGRAM

Wednesday, November 21

Arrival, Hiking, Opening Lecture

- 14:30 The traditional “scientific walk“ around the lake (if weather permits)
- 17:00 – 17:15 Welcome** (C. Haass)
- 17:15 – 18:15 Key Note Lecture**
C. Van Broeckhoven, VIB, University of Antwerp, Belgium
Genetics of FTL-ALS: new insights
- 18:15 – 19:00 Announcement of the Hans & Ilse Breuer Award 2013** (R. Bergfeld/C. Haass)

19:15 Cocktails

20:00 Dinner

Thursday, November 22

9:00 – 10:10 Amyloid production, toxicity and spreading I

Chair: E. Mandelkow

Invited speaker

- 9:00 – 9:25 D. Rubinsztein, University of Cambridge, UK
Autophagy and neurodegeneration

Short talks

- 9:25 – 9:40 H.-U. Demuth, Probiobdrug AG, Halle, Germany
Prion-like behavior and tau-dependent cytotoxicity of β -amyloid oligomers seeded by pyroglutamylated β -amyloid – and its therapeutic prevention
- 9:40 – 9:55 M. Jucker, DZNE & University of Tübingen, Germany
Modeling cerebral beta-amyloidosis
- 9:55 – 10:10 J. Tatzelt, DZNE & University of Munich, Germany
The heat shock response is modulated by and interferes with toxic effects of scrapie prion protein and amyloid-beta

10:10 – 10:50 Coffee Break/Poster Session

10:50 – 11:45 Glio-vascular dysfunction

Chair: U. Lindauer

Invited speaker

- 10:50 – 11:15 A. Quaegebeur, VIB, University of Leuven, Belgium
Oxygen sensors, neuroprotection and metabolism: unexpected liaisons with therapeutic opportunities for neurodegeneration

Short talks

- 11:15 – 11:30 M. Dichgans, ISD & University of Munich, Germany
Histone deacetylases as a target for stroke prevention
- 11:30 – 11:45 G. Petzold, DZNE & University of Bonn, Germany
Glial and vascular dysregulation in vascular dementia and Alzheimer’s disease

12:30 – 13:30 Lunch

13:30 – 15:30 Time for recreation

15:30 – 16:30 Role of inflammation

Chair: T. Misgeld

Short talks

- 15:30 – 15:45 H. Wekerle, MPI Neurobiology, Munich, Germany
Brain inflammation and autoimmunity in MS: a chicken/egg dilemma?
- 15:45 – 16:00 M. Heneka, DZNE & University of Bonn, Germany
Multiple level interactions between neurodegeneration and neuroinflammation in Alzheimer's disease
- 16:00 – 16:15 M. Kerschensteiner, University of Munich, Germany
How neuroinflammation causes axon degeneration
- 16:15 – 16:30 K. Winklhofer, DZNE & University of Munich, Germany
Mechanisms of stress protection and their role in neurodegenerative diseases

16:30 – 17:10 Coffee Break/Poster Session

17:10 – 18:35 ALS and FTLN: Genes and mechanisms

Chair: G. Kleinberger

Invited speaker

- 17:10 – 17:35 M. Polymenidou, University of California, San Diego, USA
Misregulated RNA processing in Amyotrophic lateral sclerosis (ALS)

Short talks

- 17:35 – 17:50 M. Neumann, DZNE & University of Tübingen, Germany
FET proteins in ALS and FTD: molecular neuropathology and animal models
- 17:50 – 18:05 B. Schmid, DZNE Munich, Germany
TDP-43 loss of function analysis in zebrafish
- 18:05 – 18:20 D. Edbauer, DZNE Munich, Germany
Loss of fused in sarcoma (FUS) promotes pathological tau splicing
- 18:20 – 18:35 C. Haass, DZNE & University of Munich, Germany
Cellular mechanisms of FTLN and ALS

19:00 Dinner

Friday, November 23

9:00 – 10:25 In vivo imaging of neuronal function and dysfunction

Chair: U. Müller

Invited speaker

- 9:00 – 9:25 C. Hoogenraad, University of Utrecht, The Netherlands
Control of neuronal polarity and plasticity - the role of dynamic cargo trafficking

Short talks

- 9:25 – 9:40 F. Bradke, DZNE Bonn, Germany
Cytoskeletal mechanisms of axonal growth and regeneration
- 9:40 – 9:55 M. Hübener, MPI of Neurobiology, Munich, Germany
Imaging cortical activity in behaving mice under physiological and neuropathological conditions
- 9:55 – 10:10 J. Herms, DZNE Munich, Germany
Pharmacological inhibition of BACE1 impairs the formation of dendritic spines
- 10:10 – 10:25 T. Misgeld, DZNE & Technical University of Munich, Germany
New tools to study axon degeneration in mice

10:25 – 11:05 Coffee Break/Poster Session

11:05 – 12:15 Amyloid production, toxicity and spreading II

Chair: S. Weggen

Invited speaker

11:05 – 11:30 M. Spillantini, University of Cambridge, UK
Axonopathy in a cellular model of progressive tau pathology

Short talks

11:30 – 11:45 J. Pahnke, DZNE & University of Magdeburg, Germany
ABC transporters in neurodegeneration and neuroregeneration

11:45 – 12:00 H. Steiner, DZNE & University of Munich, Germany
Modulation of γ -secretase activity by the lipid environment

12:00 – 12:15 S. Lichtenthaler, DZNE & Technical University of Munich, Germany
Secretases in Alzheimer's disease: functional characterization by proteomics

12:30 – 13:30 Lunch

13:30 – 15:30 Time for recreation

15:30 – 16:40 Translational research

Chair: J. Schulz

Invited speaker

15:30 – 15:55 A. Abeliovich, Columbia University, New York, USA
Modeling Alzheimer's disease by directed conversion of patient skin cells

Short talks

15:55 – 16:10 G. Höglinger, DZNE & Technical University of Munich, Germany
Gene-environment interactions in tauopathies

16:10 – 16:25 G. Kempermann, DZNE Dresden, Germany
A systems genetics approach to adult neurogenesis

16:25 – 17:05 Coffee Break/Poster Session

17:05 – 18:15 Translational research (continued)

Chair: M. Dichgans

Invited speakers

17:05 – 17:30 P. Heutink, University of Amsterdam, The Netherlands & DZNE Tübingen, Germany
Molecular genetics of FTD

17:30 – 17:55 K.S. Kosik, University of California, Santa Barbara, USA
Genomic and transcriptomic studies of FAD and familial tauopathies

Special event

17:55 – 18:15 Antioquia Colombia: A genetic crucible of Alzheimer's disease (film report by K.S. Kosik)

18:30 Dinner

Saturday, November 24

Departure