

Dear Friends and Colleagues!

It is our sincere pleasure to welcome you to the 1st International Conference on Cognitive Reserve in the Dementias (ResDem) in Munich on 24-25 November 2017.

Research on protective factors in different dementias has received growing attention during the last years. A key finding was that higher levels of life experiences such as cognitive, social and physical activities are associated with a later onset and decreased risk of dementia. The brain mechanisms underlying these protective effects yet remain largely unknown, even though it is crucial to further understand these mechanisms so that this knowledge can be used to develop effective therapies and preventive strategies.

ResDem is the first conference entirely dedicated to reserve and its underlying mechanisms. Leading experts from different scientific areas, including imaging, genetics, intervention and preclinical research, will be brought together. Reserve mechanisms across different types of neurodegenerative diseases will be discussed. A data blitz will give young upcoming researchers an opportunity to present their results.

We cordially welcome you to an exciting meeting in the beautiful city of Munich. You reserve it!

Prof. Robert Perneczky
Chairperson

Prof. Michael Ewers
Co-Chairperson

DAY 1 FRIDAY, 24TH NOVEMBER 2017

09.00-09.15

Welcome

Robert Perneczky/Michael Ewers, Ludwig-Maximilians-University Munich, Germany

09.15-09.45

Opening presentation: The future of cognitive reserve research

Yaakov Stern, Columbia University, New York, USA

SESSION 1: FUNCTIONAL MECHANISM UNDERLYING RESERVE

Chair: Michael Ewers, LMU Munich, Germany

09.45-10.05

Brain metabolic networks underlying cognitive reserve

Silvia Morbelli, University of Genoa, Italy

10.05-10.25

Left frontal lobe hub connectivity moderates impact of Alzheimer's pathology on cognitive function

Nicolai Franzmeier, Ludwig-Maximilians-University Munich, Germany

10.25-10.45

Functional connectivity analyses within the context of an attentional control task suggests higher efficiency of the bilingual brain

Ana Ines Ansaldo, Université de Montréal, Montreal

10.45-11.05

Hyperactivation: Friend or foe in dementia?

Willem Huijbers, Tilburg University, The Netherlands

11.05-11.25

Critical importance of network hubs in dementia

Nicolas Crossley, King's College London, United Kingdom

11.30-13.00

Lunch break

12.00-13.00

Press conference

SESSION 2: PRECLINICAL RESEARCH AND SMALL ANIMAL STUDIES

Chair: Christian Haass, German Center for Neurodegenerative Diseases Munich, Germany

13.00-13.20

η -Secretase processing of APP inhibits neuronal activity in the hippocampus

Christian Haass, German Center for Neurodegenerative Diseases Munich, Germany

13.20-13.40

Hippocampal neurogenesis and neurogenic reserve

Gerd Kempermann, German Center for Neurodegenerative Diseases Dresden, Germany

13.40-14.00

HPA axis and circadian abnormalities in preclinical AD: data from the benchside to the bedside

Chinedu Udeh-Momoh, Imperial College London, United Kingdom

14.00-14.20

Long-term environmental enrichment and hippocampal plasticity

Oliver Wirths, Georg-August-University Göttingen, Germany

14.20-14.40

Brain reserve in Parkinson's disease animal models

Beate Winner, Friedrich-Alexander-University Erlangen, Germany

14.45-15.55

Coffee break and poster session

SESSION 3:

DATA BLITZ: EARLY-STAGE RESEARCHERS - BLUE SKY

Chair: Robert Perneczky, Ludwig-Maximilians-University Munich, Germany

15:55-16:00

Tau pathology and cognitive reserve in Alzheimer's disease

Merle Höning, University Hospital Cologne, Germany

16:00-16:05

Hippocampal resting state functional connectivity at 7 Tesla and its association with episodic memory and Alzheimer's disease related CSF biomarkers

Theresa Köbe, Charité Berlin, Germany

16:05-16:10

Effects of lifespan cognitive and leisure engagement and APOE ϵ 4+ on mid-life cognitive functioning

Rebecca Ailish Atkinson, University of Sussex, United Kingdom

16:10-16:15

Do leisure activities and rest-activity rhythm explain executive performance in aging?

Fabienne Collette, Liège University, Belgium

16:15-16:20

High-dose spermidine supplementation to improve episodic memory in individuals with subjective cognitive decline: proof-of-concept study

Miranka Wirth, Charité Berlin, Germany

16:20-16:25

Cognitive reserve and hippocampal diffusivity in cognitively healthy elderly people and MCI patients

Judith Henf, University Medicine Rostock, Germany

16:25-16:30

Validation of a German version of the Lifetime of Experiences Questionnaire (LEQ) as a measurement of cognitive reserve - results of the DELCODE study

Sandra Roeske, German Center for Neurodegeneration Disorders, Germany

16:30-16:35

Virtual reality neurofeedback paradigm for the assessment of hippocampal hyperactivity and cognitive reserve

Stavros Skouras, Pompeu Fabra University, Spain

16:35-16:40

Neural basis of cognitive reserve: Role of education and bilingualism

Shailaja Mekala, Nizam's Institute of Medical Sciences, India

16:40-16:45

Development and predictive validation of a composite score of cognitive reserve in the Cardiovascular Health Study

Stephanie Evans, Imperial College London, United Kingdom

SESSION 4:

DEBATE: DO WE NEED A NEW CONCEPT OF COGNITIVE RESERVE?

Chair: Amos Korczyn, Tel Aviv University, Ramat Aviv, Israel

16.45-17.00

Pro: A new conceptual framework is required.

Michael Ewers, Ludwig-Maximilians-University Munich, Germany

17.00-17.15

Con: Current concepts and definitions are still appropriate.

Alexander Kurz, Technical University Munich, Germany

17.15-17.30

Discussion and rebuttals

Closure Day 1



- 08.30-08.35** Welcome
Robert Perneczky/Michael Ewers, Ludwig-Maximilians-University Munich, Germany
- 08.35-09.05** Reduction of age-specific dementia incidence in the Cognitive Function and Ageing studies
Fiona Matthews, Newcastle University, United Kingdom

SESSION 5: INTERVENTIONS TO STRENGTHEN RESERVE

- Chair: Gael Chetelat, University of Caen Normandy, France
- 09.05-09.25** Meditation to enhance cognitive reserve in aging and Alzheimer's disease
Gael Chetelat, INSERM U1077, Caen, France
- 09.25-09.45** Physical activity over a decade and brain structural and functional changes
Carl-Johann Boraxbekk, Umeå University, Sweden
- 09.45-10.05** Modulation of high cognitive reserve working memory networks using high definition tDCS
David Bartrés-Faz, University of Barcelona, Spain
- 10.05-10.25** Intellectual enrichment to protect against cognitive decline in multiple sclerosis
Mara Rocca, INSPE Unit San Raffaele Hospital Milan, Italy
- 10.25-10.45** Multimodal interventions and dementia prevention
Shireen Sindi, Karolinska Institute Stockholm, Sweden

10.50-11.00 Coffee break

SESSION 6: BRAIN CORRELATES OF RESERVE

- Chair: Arfan Ikram, Erasmus University Medical Centre Rotterdam, The Netherlands
- 11.00-11.20** Serotonin 5-HTTLPR modulates brain damage in frontotemporal dementia
Enrico Premi, University of Brescia, Italy
- 11.20-11.40** Novel genetic loci underlying intracranial volume
Arfan Ikram, Erasmus University Medical Centre Rotterdam, The Netherlands
- 11.40-12.00** Brain size and the compensation of Alzheimer's disease symptoms
Robert Perneczky, Ludwig-Maximilians-University Munich, Germany
- 12.00-12.20** Late adulthood activities and brain structure
Eider Arenaza-Urquijo, Inserm U1077 Caen, France
- 12.20-12.40** Conflicting cerebrospinal biomarkers and the effects of reserve
Panagiotis Alexopoulos, University of Patras, Greece

12.45-13.45 Lunch break

SESSION 7: EPIDEMIOLOGY OF RESERVE FACTORS

- Chair: Nikolaos Scarmeas, National and Kapodistrian University of Athens, Greece
- 13.45-14.05** Physical activity, APOE and amyloid in prodromal Alzheimer's disease
Catherine Robb, Imperial College London, United Kingdom
- 14.05-14.25** Protective factors associated with Parkinson's disease
John Hindle, Bangor University Wales, United Kingdom
- 14.25-14.45** Mediterranean diet, brain structure and Alzheimer's dementia risk
Nikolaos Scarmeas, Columbia University, New York, USA
- 14.45-15.05** Life course activity participation and cognitive ageing in the Lothianbirth cohorts
John Starr, University of Edinburgh, Scotland
- 15.05-15.25** Bilingualism and age at onset of dementia
Thomas Bak, University of Edinburgh, Scotland
- 15.30-15.50** Closing words and poster awards
- 15.50-16.30** Farewell coffee
- Conference closure



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24-25 November 2017

SCHEDULE