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!

Chair: Robert Perneczky, Ludwig-Maximilians-University Munich, Germany
Co-Chair: Michael Ewers, Ludwig-Maximilians-University Munich, Germany

SESSION 1: FUNCTIONAL MECHANISM UNDERLYING RESERVE

Chair: Michael Ewers, LMU Munich, Germany
09:45-10:05 Left frontal lobe hub connectivity moderates impact of Alzheimer’s pathology on cognitive function
Nicola Framenau, 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 Aranha, Universidade de Minas Gerais, Brazil
10:45-11:05 Hyperactivation: Friend or foe in dementia?
Willem Huizenga, Tilburg University, The Netherlands
11:05-11:25 Critical importance of network hubs in dementia
Nicolas Crossley, King’s College London, United Kingdom
11:30-12:00 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 Haase, 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
Chiwuah Uchis-Mamai, 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
Michael Ewers, Ludwig-Maximilians-University Hospital Cologne, Germany
16:00-16:15 Hippocampal resting state functional connectivity at 7 Tesla and its association with episodic memory and Alzheimer’s disease related CSF biomarkers
Thomas Kloe, Charité Berlin, Germany
16:05-16:10 Effects of lifespan cognitive and leisure engagement and APOE ε4 on mid-life cognitive functioning
Rebecca Alton Atkins, University of Sussex, United Kingdom
16:10-16:15 Do leisure activities and rest-activity rhythm explain executive performance in aging?
Fabienne Collette, UCL, Belgium
16:15-16:20 High-dose spermidine supplementation to improve episodic memory in individuals with subjective cognitive decline: proof-of-concept study
Miranda Wirth, Charité Berlin, Germany
16:20-16:25 Cognitive reserve and hippocampal diffusivity in cognitively healthy elderly people and MCI patients
Judith Hert, University Medicine Rostock, Germany
16:25-16:30 Validation of a German version of the Lifetime of Experiences Questionnaire (LEQ) as a measure of cognitive reserve - results of the DELCODE study
Selma Roskic, German Center for Neurodegenerative Disorders, Germany
16:30-16:35 Virtual reality neurofeedback paradigm for the assessment of hippocampal hyperactivity and cognitive reserve
Mano Sivasubramanian, Pompeu Fabra University, Spain
16:35-16:40 Neural basis of cognitive reserve: Role of education and bilingualism
Shalaja Melka, Niwas’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

Close Day 1!
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
Nicolaos 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

We would like to thank the VERUM Foundation (www.verum-foundation.de) for their kind support.