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FOUNDATION FOR BEHAVIOUR AND ENVIRONMENT

PRESS RELEASE

Four investigators from the MEMOSAD project receive the VERUM Award 2009

The official pre-symposium of the 9th International AD/PD Conference 2009 organized by the VERUM Foundation presented results from the EU-funded projects MEMOSAD, MEMOLOAD, and MEMSTICK

Prague, 11 March 2009 – At the opening ceremony of the AD/PD 9th International Conference in Prague, Czech Republic, the Congress President Dr. Avraham Fisher presented the VERUM Award 2009 to four young scientists from Belgium and Germany. They received the award in recognition of their outstanding scientific achievements within the EU-funded research project MEMOSAD. Kerensa Broersen and Inna Kuperstein from the Vlaams Instituut voor Biotechnologie (VIB) together were honoured with a 1st prize of 3000.00 Euro, Dominik Paquet from the Ludwig-Maximilians-Universität München was honoured with a 2nd prize of 2.000.00 Euro, while Lutgarde Serneels, also from the Vlaams Instituut voor Biotechnologie, was granted a 3rd prize with 1000.00 Euro.

Kerensa Broersen, a professor at the Vrije Universiteit Brussel and a researcher at the VIB Department of Molecular and Cellular Interactions, and Inna Kuperstein, a postdoctoral researcher at the VIB Department of Molecular and Developmental Genetics in Leuven, together received the 1st prize for their presentation "Pathological Abeta 40/42 ratio facilitates formation of stable neurotoxic forward and backward oligomers". The research group studied the Abeta40 to Abeta42 ratios of aggregates during the formation of amyloid plaques and during the lipid-driven backward release of oligomers from the plaques. They observed that the effects of the oligomers on neuronal cell death and memory formation in mice were strongly dependent on this ratio and, therefore, they concluded that in Alzheimer disease the quality of aggregates is more important for the generation of toxic amyloid species than their absolute quantity.

Dominik Paquet, a PhD student in the Laboratory for Neurodegenerative Disease Research at the Adolf Butenandt Institute in Munich, was awarded the 2nd prize for his presentation "A novel tau transgenic zebrafish model for drug discovery". The research group developed a novel tau transgenic zebrafish model and investigated with this system the efficacy of two inhibitors of tau phosphorylation identified in a high-throughput screening process. While both inhibitors were highly active in cell cultures, only one of them displayed in vivo activity which is the prerequisite for its utilization as a therapeutic drug in Alzheimer disease. The new zebrafish transgenesis technology allows the modelling of numerous other human disorders which are based on misfolding or overexpression.

Lutgarde Serneels, a post-doctoral scientist at the VIB Department of Molecular and Developmental Genetics in Leuven, was honoured for the presentation "Aph1B gamma-secretase generates long Abeta peptides, and genetic ablation improves Alzheimer's disease phenotypes without affecting Notch signalling in the mouse". The research group demonstrated that Aph1A- and Aph1B sub-units of the gamma-secretase complexes vary in their biochemical properties and generate different profiles of Abeta peptides which constitute the basis of the Alzheimer pathology. They further observed that Aph1B/C sub-units are expressed in specific brain regions and that their inactivation leads to an improvement of disease-relevant symptoms in an Alzheimer mouse model without generating side effects which always occur after inhibition of the gamma-secretase complex as a whole. As the Aph1B sub-unit contributes significantly to the total gamma-secretase activity in the human brain, specific targeting opens a new avenue to a less toxic therapy in Alzheimer disease.

According to Prof. Franz Adlkofer of the Munich-based VERUM Foundation, the organizer and coordinator of the MEMOSAD project, the present situation in research on Alzheimer disease and related dementias may be summarised as follows:
"The societal and economic burden of neurodegenerative diseases, first and foremost of Alzheimer disease, the most frequent cause of dementia, is growing rapidly due to the increasing human life expectancy of populations all over the world. It is estimated that as many as 30 million people worldwide are living with Alzheimer. By 2050, this figure may more than triple to over 100 million. If neither reliable tools for early diagnosis nor

prevention or treatment options for Alzheimer are developed in the near future, a global pandemic exceeding even that of HIV/AIDS will be unavoidable. And worst of all, as formulated by the French President Sarkozy and confirmed in Prague at the AD/PD International Conference, Alzheimer plays hide-and-seek with researchers, because the most promising avenues today could be dead ends tomorrow. Faced with a social crisis of this dimension the French President announced a comprehensive Alzheimer plan for his country which should as soon as possible be extended to the entire European Union. Such a plan can only become reality, if enough young scientists are attracted by this extremely challenging and competitive area of research. The VERUM Foundation wishes to support this plan by honouring outstanding scientific achievements of young scientists with a foreseeable great career in AD research."

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About MEMOSAD, MEMOLOAD and MEMSTICK:
MEMOSAD, a three-year collaborative project funded by the EU with Euro 3 million, is aimed at defining the molecular mechanisms of memory loss and at developing disease modifying therapeutics for the prevention of memory loss in Alzheimer disease. http://www.verum-foundation.de/memosad
MEMOLOAD, a five year collaborative project funded by the EU with Euro 3 million, focuses also on the molecular and biological mechanism underlying memory loss in Alzheimer disease, with the strategy directed to the signalling pathways involved in memory consolidation. http://www.uku.fi/MEMOLOAD
MEMSTICK, a three-year collaborative project funded by the EU with Euro 2.97 million, investigates the role of novel cell adhesion molecules in memory loss in general and their significance as therapeutic targets. http://www.memstick.org

MEMOSAD contributed nine presentations, MEMOLOAD four and MEMSTICK one to the symposium.

About VERUM:
VERUM - Foundation for Behaviour and Environment, based in Munich, Germany, is a non-profit scientific organisation that promotes research into the effects of behaviour and the environment on human health. VERUM is dedicated to further scientific knowledge in these areas and to create a sound basis for preventive medical measures. Since 2000 VERUM has among others organized and coordinated three international research projects – REFLEX, DIADEM, and APOPIS – which were funded by the EU Commission within the 5th and 6th Framework Programme with a total amount of Euro 15 million. From January 2008 till December 2010, VERUM is coordinating the MEMOSAD project. http://www.verum-foundation.de

About the EU's 7th Framework Programme (FP7):
Like in the previous six Framework Programmes the Seventh Framework Programme (FP7) bundles all research-related EU initiatives together under a common roof playing a crucial role in reaching the goals of growth, competitiveness and employment. This means that FP7 is a key pillar for the European Research Area (ERA) and with it for the Lisbon strategy to become one day the most dynamic competitive knowledge-based economy in the world. More information: http://cordis.europa.eu/fp7/understand_en.html

Vlaams Instituut voor Biotechnologie: http://www.vib.be
Adolf-Butenandt-Institut: http://www.biochemie.abi.med.uni-muenchen.de
9th International AD/PD Conference 2009: http://www.kenes.com/adpd/