

International Symposium

Advances in Systems Biology in Neurosciences

6. February 2015 in Geneva, Switzerland

Organised by

the AgedBrainSYSBIO project and the SIB - Swiss Institute of Bioinformatics

With financial support from Novartis and Roche



Introduction

Alzheimer's disease is characterized by diminishing memory and thinking skills, affecting as many as 8 million Europeans, most over the age of 60. The causes of Alzheimer's disease are still largely unknown, though they are likely a combination of genetic, environmental and other factors.

As part of ongoing research to better understand the complexities of the human brain, different European-funded FP7-HEALTH consortia such as AgedBrainSYSBIO (on systems biology, synapse and ageing) and SYNSYS (on systems biology and synapse), the European flagship Human Brain Project, Alzheimer's Disease Neuroimaging Initiative (ADNI) and the Allen Institute for Brain Science in the US are embarking on efforts to unravel molecular mechanisms involved in brain functioning both in normal conditions and during ageing.

We expect that this meeting will generate novel interactions between leading groups in the field. Because of the increasing interest in ageing-related diseases such as neuropathologies, we expect the symposium to gather up to 200 participants. This symposium will bring together clinicians, biologists, bioinformaticians, statisticians, who will present the latest advances in the field of neuroscience, taking advantage of state-of-the-art approaches provided by omics-biotechnologies, supercomputers, neuroimaging, amongst others.

Programme

Session I - Systems biology & neuroscience

This session will focus on new path towards understanding the brain and building information technology

Session II - Systems biology, genome-wide association studies and neuronal diseases

This section aims at molecular analysis of synapse function, its dynamic modeling and their links with genetic architecture of neuronal diseases.

Session III - Systems biology, genome-wide association studies and ageing

This section will focus on the generation of a blueprint for the discovery of novel pathways and targets that enable rational strategies to design therapies for normal and pathological ageing

Invited Speakers

Prof Arthur W. Toga, Center for Computational Biology, USC, Los Angeles, CA, USA

Prof Jane A Driver, Brigham and Women's Hospital, Boston, MA, USA

Dr. Ed Lein, Allen Institute for Brain Science, Seattle, WA, USA (*to be confirmed*)

Prof. Henry Markram, The Blue Brain Project EPFL, Lausanne, Switzerland (*to be confirmed*)

Prof. Jean-François Démonet, CHUV University Hospital, Lausanne, Switzerland

Prof. Seth Grant, Center for Neuroregeneration, University of Edinburgh, UK (*to be confirmed*)

Dr. Sean Hill, The Blue Brain Project EPFL, Lausanne, Switzerland

and with the participation of AgedBrainSYSBIO members

Dr. Yann Herault, IGBMC, Illkirch, France

Prof. James Adjaye, Institute for Stem Cell Research and Regenerative Medicine, University of Dusseldorf, Germany

Prof. Tal Pupko, George S. Wise Faculty of Life Sciences, Tel Aviv University, Israel

Dr. Jérôme Dauvillier, CH Swiss-Prot & Vital-IT group, SIB- Swiss Institute of Bioinformatics, University of Lausanne, Switzerland

Prof. Michel Simonneau, INSERM U894, Centre Psychiatrie & Neurosciences, Paris, France

For more information and to register, please visit: www.agedbrainsysbio.eu

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