

Biomarkers for Brain Disorders: Challenges and Opportunities

Sunday 1- Tuesday 3 February 2015

Wellcome Trust Genome Campus, Hinxton, Cambridge, UK

Draft programme

Posters will be on display throughout the meeting

Sunday 1 February 2015

12:00-13:00 Registration and Buffet Lunch

13:15 Welcome and Introduction
Andreas Jeromin, Quanterix Inc., USA

Session 1: Brain Biomarkers – Challenges and Opportunities
Chair: Andreas Jeromin, Quanterix Inc., USA

13:30 Keynote Presentation
Title to be confirmed
Mark Schmidt, Janssen, Belgium

14:30 Title to be confirmed
Alessandro Bertolino, Roche, Switzerland

15:00 Large, clinical population-based studies as sources for big datasets
Simon Lovestone, King's College London, UK

15:30 Afternoon tea
EBI-South Foyer

16:00 Harmonisation and standardisation of biobanking and biomarker measurement
Charlotte Teunissen, VU University Medical Centre, The Netherlands

16:30 Standardisation of MRI measures of cerebrovascular disease
Joanna Wardlaw, University of Edinburgh, UK

17:00 Biomarkers in AD – Regulatory point of view
Maria Isaac, European Medicines Agency, UK

17:30 Molecular biomarkers of neurodegenerative disease in the olfactory epithelium
Gabriela Gurria, Wellcome Trust Sanger Institute, UK

- 17:45 Standardisation, big data and global knowledge exchange in metabolomics:
an opportunity for brain biomarker research
Reza Salek, EMBL-EBI, UK
- 18.00 Session Summary/Discussion
- 18.30 Welcome drinks reception
- 19:00 Dinner with cash bar (in Hinxton Hall)

Monday 2 February 2015

- 07.30 Breakfast

Session 2: **Prodromal Biomarkers**

*Chair: **Brit Mollenhauer** University of Gottingen, Germany*

- 08.30 The European Medical Information Framework on Alzheimer's disease
Pieter Jelle Visser, Maastricht University, The Netherlands
- 09.00 Identification of prodromal biomarkers in AD-the NewMeds Initiative
Jill Richardson, GSK, UK
- 09.30 talk title tbc
Kenneth Marek, Molecular NeuroImaging, USA
- 10:00 Morning Coffee
EBI- South Foyer
- 10.30 Non-motor symptoms and other candidates as prodromal biomarkers for
Parkinson's disease
Brit Mollenhauer, University of Gottingen, Germany
- 11:00 Large-clinical population-based studies as sources for big datasets: CFAS
Carol Brayne, University of Cambridge, UK
- 11:30 Blood-based markers of Alzheimer's pathology and early cognitive decline:
potential for enrichment of prevential trials?
Steven Kiddle, King's College London, UK
- 11:45 A functional biomarker to understand the earliest pathological pathways in
Parkinson's disease
Amy Smith, University of Oxford, UK
- 12:00 Session summary/Discussion
- 12.30 Lunch
EBI- South Foyer

Session 3 **Heterogeneity in Neurodegenerative Diseases**

*Chair: **William Potter** NIH, USA*

- 13.30 Vascular factors in neurodegeneration
Geert Jan Biessels, *University of Utrecht, The Netherlands*
- 14:00 Cognitively healthy centenarians – key to finding treatment for Alzheimer's?
Henne Holstege, *VU University Medical Centre, The Netherlands*
- 14:30 Arterial spin labeling reveals differences in perfusion and cerebrovascular reserve in a mouse model for Alzheimer's disease
Kristof Govaerts, *KU Leuven, Belgium*
- 14:45 Genetic influences on metabolite levels in Alzheimer's disease
Petroula Proitsi, *King's College London, UK*
- 15.00 Afternoon Tea
EBI-South Foyer
- 15:30 Additional neurological diseases
Mark Allegretta, *National Multiple Sclerosis Society, USA*
- 16:00 Identification and replication of biomarkers of Alzheimer's disease in blood samples from different cohorts
Aurelie Boucard, *PHARNEXT, France*
- 16:15-16.45 Session Summary/Discussion/Introduction to workshops
- 17.00 **Workshops**
- Group 1: Cognition/functional biomarkers**
Facilitators: Brit Mollenhauer and Maria Isaac
- Group 2: Big data and biomarkers: the need for standards**
Facilitators: Andreas Jeromin and Pieter Jelle Visser
- Group 3: A critical appraisal of current biomarkers**
Facilitators: Andy Lockhart and Agneta Nordberg
- 18:30 **Poster session with drinks reception** (Chestnut suite, Hinxton Hall)
18.30-19.15 (odd numbers); 19.15-20.00 (even numbers)
- 20:00 Conference Dinner

Tuesday 3 February 2015

- 07.30 Breakfast
- 08:30 **Workshops** contd.
Summary of break-out-sessions from group facilitators
Marial Isaac, Pieter Jelle Visser and Agneta Nordberg
- Session 4 Imaging and Early Diagnosis**
Chair: Wiesje van der Flier VU University Medical Center, The Netherlands

- 09:15 Tau imaging
Bart van Berckel, *VU University Medical Centre, The Netherlands*
- 09.45 Standardization of neuroimaging techniques
Derek Hill, *IXICO, UK*
- 10:15 Impact of amyloid imaging on early diagnosis and clinical trials
Agneta Nordberg, *Karolinska Institutet, Sweden*
- 10:45 Morning Coffee
EBI-South Foyer
- 11:15 Blood protein markers of neocortical amyloid burden: a candidate study using SOMAscan technology
Nicola Voyle, *King's College London, UK*
- 11:30 The use of polygenic risk scores for predicting the rate of cognitive decline in Alzheimer's disease
Elizabeth Baker, *King's College London, UK*
- 11.45 Biomarkers for disorders of consciousness
Laurent Hermoye, *Imagilys, Belgium*
- 12:00 Session Summary/Discussion
- 12.30 Lunch
EBI-South Foyer
- Session 5 Traumatic Brain Injury and Stroke**
Chair: Andy Lockhart GlaxoSmithKline, UK
- 13:15 Developing and implementing biomarkers for precision medicine approaches in traumatic brain injury
David Menon, *University of Cambridge, UK*
- 13:45 Are we ready to use stroke biomarkers?"
Joan Montaner, *Vall Hebron Research Institute, Spain*
- 14:15 Blood transcriptome changes after stroke: a next-generation sequencing study in an African-American population
Robert Meller, *Morehouse School of Medicine, USA*
- 14.30 Session summary and conference wrap-up
- 15:00 Conference closes