



DAY 1 THURSDAY 06.02.2014

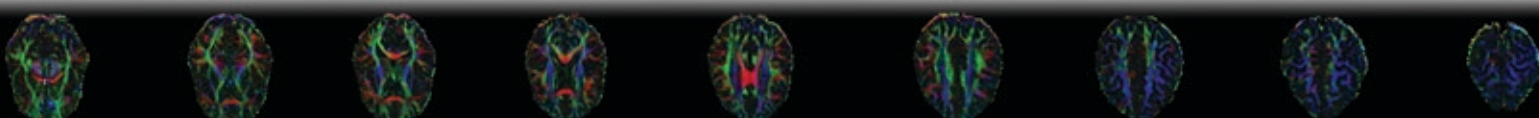
08:00 - 08:30 Registration
08:30 - 08:40 Introduction (*Menno Witter*)

PART 1 White matter anatomy, physiology and metabolism *(lead by MD PhD Erik Berntsen)*

08:45 - 09:30 Human white matter anatomy (*Karl Zilles*)
09:35 - 10:20 White matter metabolism and physiology (*Bruce Ransome*)
10:25 - 10:45 BREAK

PART 2 MRI methods for in vivo investigation of white matter *(lead by Associate professor Live Eikenes)*

10:45 - 11:30 Concepts of structure-function relationships in white matter (*Marco Catani*)
11:30 - 12:00 MRI methods for in vivo characterization of white matter (*Anders Kristoffersen*)
12:05 - 12:35 MRI of axonal microstructure (*Tim Dyrby*)
12:35 - 13:30 LUNCH
13:30 - 14:15 Ultra-high resolution imaging of myelinated fibers and fiber tracts (*Karl Zilles*)
14:15 - 15:00 DTI analyses approaches from voxel to graphy theory (*Alexander Leemans*)
15:00 - 15:40 Automated tractography methods (*Eelke Visser*)
15:40 - 16:10 Plenary discussion: Is it possible to infer in vivo white matter structure from MRI derived measures? (*Leemans, Dyrby, Catani and Fawcett*)
16:10 - 16:30 BREAK
16:30 - 17:15 Atlas of human brain connections (*Marco Catani*)
17:20 - 18:05 Human white matter development (*Christian Beaulieu*)
18:05 - 18:50 Stability and plasticity of white-matter structure-function associations across life-span: observations on the corpus callosum (*Rene Westerhausen*)
18:50 - 19:00 Closing remarks
19:00 Dinner for all attendants who would like to participate at the MR center Medical Technical Building (need to register to participate)





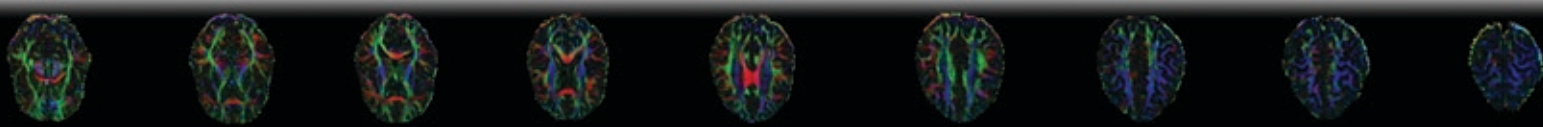
DAY 2 FRIDAY 07.02.2014

PART 3 White matter pathology

- 08:20 - 08:30 Introduction to day 2 (*Ursula Sonnewald*)
- 08:30 - 09:15 Axonal regrowth and plasticity (*James Fawcett*)
- 09:15 - 10:00 Oligodendrocyte regeneration and axonal remyelination (*Robin Franklin*)
- 10:05 - 10:20 ¹³C glucose metabolism in immature and in differentiated oligodendrocytes in vitro (*Anna Amaral*)
- 10:25 - 10:45 BREAK
- 10:45 - 11:30 Aging and white matter (*Lee Ryan*)
- 11:35 - 12:20 White matter in cerebrovascular disease (*Frederik Barkhof*)
- 12:30 - 13:30 LUNCH

PART 3 White matter pathology (continued)

- 13:30 - 14:15 Cognition and white matter hyperintensities: importance of location and load (*Torgil Vangberg*)
- 14:15 - 15:30 Are the functionally important changes in aging specific to white matter alterations? (*Carol A Barnes*)
- 15:30 - 15:50 BREAK
- 15:50 - 16:35 Pathophysiology of traumatic axonal injury (TAI) (*John T Povlishock*)
- 16:35 - 17:20 White matter in migraine (*Mark Kruit*)
- 17:25 - 17:50 Longitudinal changes in white matter in glioma (*Tuva Hope or Atle Bjørnerud*)
- 17:50 - 18:10 Plenary discussion: What is the impact of disease on white matter structure function relationships? Is the clinico-anatomical correlation method valid? (*Ryan, Barnes, Barkhof and Catani*)
- 18:10 Closing remarks
- 18:15 MCQ exams for PhD students, continued medical education and specialization.



SPEAKERS

Alexander Leemans *Image Sciences Institute, University Medical Center Utrecht, Utrecht, the Netherlands*

Anders Kristoffersen *St. Olav's University Hospital, Trondheim, Norway*

Anna Amaral *University of Cambridge, Cambridge, UK*

Atle Bjørnerud *Rikshospitalet, Oslo University hospitals, Oslo, Norway*

Bruce Ransome *Department of Neurology, University of Washington, Seattle, USA*

Carol A. Barnes
Evelyn F. McKnight Brain Institute, Neural systems memory and aging, University of Arizona, Tucson, USA

Christian Beaulieu *Faculty of Medicine and Dentistry, University of Alberta, Alberta, Canada*

Eelke Visser *The Oxford Centre for Functional MRI of the Brain, Oxford, UK*

Frederik Barkhof *Radiology and Image Analysis Centre (IAC), VU Medical Centre, Amsterdam, the Netherlands*

James Fawcett *University of Cambridge, Cambridge, UK*

John T Povlishock *Medical College of Virginia, Richmond, USA*

Karl Zilles *Institute of Neuroscience and Medicine, Research Center, Juelich, Germany*

Lee Ryan *Cognition and Neuroimaging Laboratories, University of Arizona, Tucson, USA*

Marco Catani *NATBRAINLAB, Institute of Psychiatry, King's College London, London, UK*

Mark Kruit *Department of radiology, Leiden University Medical Center, Leiden, the Netherlands*

Menno Witter
Kavli Center of Systems Neuroscience, Norwegian University of Science and Technology, Trondheim, Norway

Rene Westerhausen *Department of Biological and Medical Psychology, University of Bergen, Bergen, Norway*

Robin Franklin, *University of Cambridge, Cambridge, UK*

Tim Dyrby
Diffusion Imaging Group, Danish Research Centre for Magnetic Resonance, Hvidovre Hospital, Hvidovre, Denmark

Torgil R. Vangberg *University Hospital of Tromsø, Tromsø, Norway*

Tuva Hope *Rikshospitalet, Oslo University hospitals, Oslo, Norway*

Ursula Sonnewald *Norwegian University of Science and Technology, Trondheim, Norway*

