"Alt om hvit substans"

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	^{13}C 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, Barns, 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*