



**Course:
From Human Neuroanatomy to Psychopathology**

June 11-14, 2018
Maastricht University

Introduction

This EURON/MHeNS course introduces PhD students to basic concepts and modern methods of neuroanatomy, functional neuroanatomy and neuropathology. Particular emphasis is placed on the neuroanatomical background of neurological and psychiatric disorders.

The course of four consecutive days consists of lectures on mammalian brain anatomy, vasculature of the brain, functional and structural MRI methodologies. On all days students receive practical training in lab courses including dissection of a human brain and microscopical neuroanatomy of rodent brains and samples from human neuropathologies. There will be site visits to the MRI and TMS facilities and the Nanoscopy M4I unit. On several days we will link the functional and anatomical concepts to clinical neuropsychiatric disorders such as epilepsy, Parkinson's and Alzheimer's disease, affective disorders and developmental disorders. Current research questions will be addressed in one interactive seminar based on group work.

The multidisciplinary teaching staff consists of experts in the fields of neuroanatomy, neuroscience, imaging, and clinical neuropsychiatry and will provide an excellent learning experience for PhD students working in neuroscience, psychiatry, neurology and psychology.

PROGRAMME

DAY 1 | CHAIRMAN: JÖRG MEY

Monday June 11th, 2018

Location: Keulenzaal, UNS 40, room C0.553

08.45 – 09.15 Registration (coffee)

09.15 – 09.30 Welcome and Introduction into the course | *Jörg Mey*

09.30 – 11.00 Introduction of the students: Elevator Pitches (coffee during the talks)

11.00 – 12.00 Lecture Cerebrovasculature | *Robert van Oostenbrugge*

12.00 – 13.00 Lecture Neuroanatomy I & II | *Jörg Mey*

13.00 – 13.45 Lunch break (UNS 40, level -1 “Drielandenpunt”)

Location: UNS 40, Room C 4.577

14.00 – 15.30 Practical Microscopy I | *Ali Jahanshahi, Jörg Mey*

15.30 – 16.00 Coffee break (UNS 40, level -1 “Drielandenpunt”)

Location: Keulenzaal, UNS 40, room C0.553

16.00 – 16.40 Neurotransmission - *Alexander Flohr*

16.40 – 17.20 Developmental Neurology | *Jeroen Vermeulen*

17.20 – 18.00 Cognition and Neurodegenerative diseases | *Heidi Jacobs*

19.00 Dinner

Programme

DAY 2 | CHAIRMAN: GUNTER KENIS Tuesday June 12th, 2018

Visits scanners 8.45 - 12.00

Location: Meetingpoint: UNS 50, room 1.142A

The group will be split in two groups for site visits:

08.45 – 10.30 Group 1: visit to MRI scanner (Walter Backes)
Group 2: visit to NIBS-Labs (Sanne ten Oever)

10.30 – 12.00 Group 1: visit to NIBS-Labs (Sanne ten Oever)
Group 2: visit to MRI scanner (Walter Backes)

12.00 – 12.30 Lunch break (Coen Hemker Zaal UNS 50, room K0.480)

Location: Coen Hemker Zaal UNS 50, room K0.480

12.30 – 13.15 New (f) MRI imaging techniques | *Walter Backes*

Macroanatomy - Chairman: Jörg Mey

Location: UNS 50, Room 2.142 (for discussions) and the dissection room 2.138A

12.45 – 15.00 Macroanatomy of the human brain: dissection human brain | *Jörg Mey, Ulrike von Rango, Aleksander Jankovski, Harry Steinbusch, Canan Yurttas*

15.00 – 15.15 Coffee break (UNS 50, room 2.142)

15.15 – 17.30 Macroanatomy of the human brain: continued

DAY 3 | CHAIRMAN: BORIS KRAMER Wednesday June 13th, 2018

Location: Coen Hemker Zaal UNS 50, room K0.480

09.00 – 09.40 Functional and structural MRI correlates of cognitive comorbidity in epilepsy | *Govert Hoogland*

09.40 – 10.20 Neuropathology | *Anand Goswami*

10.20 – 11.00 From ex-vivo to in-vivo histology of human cortex with ultra-high field MRI | *Alard Roebroek*

11.00 – 11.20 Coffee break (Coen Hemker Zaal UNS 50, room K0.480)

Location: UNS 40, Room C 4.577

11.30 – 12.30 Practical Microscopy II: *Ali Jahanshahi, Jörg Mey and Anand Goswami*

12.30 – 13.15 Lunch break (UNS 40, level -1 “Drielandenpunt”)

Interactive seminar

13.30 – 16.00 2 Parallel seminars

(UNS40-A0.742) 1 Basal ganglia in controlling motor function - Moderator: Ali Jahanshahi

(UNS40-A0.754) 2 The Glutamate Hypothesis in Schizophrenia – Moderator: Canan Yurttas

Programme

16.00 – 16.15 Coffee break (Coen Hemker Zaal UNS 50, room K0.480)

Location: Coen Hemker Zaal UNS 50, room K0.480

16.30 – 17.30 **Invited key lecture:** open for other scientists
Function and dysfunction of the human brain – insights from functional neuroimaging |
David Linden

DAY 4 | CHAIRMAN: ALI JAHANSHAH
Thursday June 14th, 2018

Location: UNS 60, room M0.09

09.10 – 09.50 Neuropsychiatric disorders and deep brain stimulation | *Linda Ackermans*

09.50 – 10.30 How Electron Microscopy enables structural studies in neuroanatomy | *Carmen López Iglesias*

Location: UNS 50, level 0, M4I unit

10.30 – 10.45 Coffee break (UNS 50, level 0, M4I unit, room G0.250 coffee room)

10.45 – 12.30 Microscopy Core Lab M4I unit: 4 parallel groups- 4 sites: (1) Sample preparation
(2) Microscopy - *Carmen López Iglesias, Marie-Hélène Lenders, Hans Duimel, Helma Kuijpers, Willine van de Wetering*

12.45 – 13.45 Lunch Break (Coen Hemker Zaal UNS 50, room K0.480)

Location: UNS 50, room K4.403

14.00 – 14.40 Affective disorders: from neuroanatomy to psychopathology | *Lies Goossens*

14.40 – 15.40 Neuroglia | *Bert Brône*

15.40 – 16.00 Coffee break (UNS 50, MPR, room 1.142A)

16.00 – 16.40 In vivo molecular neuroreceptor imaging | *Matthias Bauwens*

16.40 – 17.00 Conclusion and plenary discussion

Faculty list

- *Dr Linda Ackermans*, School for Mental Health and Neuroscience, Dept. of Neurosurgery, Maastricht University Medical Centre/ linda.ackermans@mumc.nl
- *Prof. Walter Backes*, School for Mental Health and Neuroscience, Dept. of Radiology, Maastricht University Medical Centre / w.backes@mumc.nl
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- *Dr Alexander Flohr*, Hoffmann-La Roche, Inc. Basel, Switzerland
- *Dr Anand Goswami*, Institute for Neuropathology, Uniklinik RWTH Aachen / agoswami@ukaachen.de
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- *Dr Ulrike von Rango*, Dept. of Anatomy & Embryology, Maastricht University / ulrike.vonrango@maastrichtuniversity.nl
- *Dr Alard Roebroek*, Faculty of Psychology and Neuroscience, Dept. Cognitive Neuroscience, Maastricht University / a.roebroek@maastrichtuniversity.nl
- *Prof. Harry Steinbusch*, School for Mental Health and Neuroscience, Division Neuroscience, Maastricht University / h.steinbusch@maastrichtuniversity.nl
- *Prof. Jeroen Vermeulen*, Dept. Neurology, Maastricht University Medical Centre / jeroen.vermeulen@mumc.nl
- *Prof. Canan Yurttas*, Department of Anatomy, Ege University, School of Medicine, Izmir, Turkey / canan.yurttas@ege.edu.tr

Organization:

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