



**Course:
From Human Neuroanatomy to Psychopathology**

April 3-6, 2017
Maastricht University

Introduction

This MHeNs course aims to introduce PhD students to basic concepts of neuroanatomy, functional neuroanatomy and neuropathology and will clarify the current knowledge on the neuroanatomical and neurobiological underpinnings of neuropsychiatric disorders.

The course of 4 consecutive days starts at the first day with lectures on the anatomy and cerebrovasculature of the brain followed by theoretical lessons on functional and structural MRI methodologies. On the second day we will continue the imaging part with visits of the MRI and TMS scanners. Thereafter students will get hands-on training on the neuroanatomy by real dissection of the human skull and brain. The course will focus on microscopical analysis of the human and rodent brain under normal and pathological conditions with practicals on day 1, 3 and 4. The last day will link the functional and anatomical concepts to clinical neuropsychiatric disorders such as schizophrenia, epilepsy, Parkinson's and Alzheimer's disease, affective disorders and developmental disorders.

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: HEIDI JACOBS / JÖRG MEY

Monday April 3th, 2017

08.30 – 09.00 Registration (UNS 50, room 1.142A)

Location: Bontezaal, UNS 50, room 1.331

09.00 – 09.15 Welcome and Introduction into the course
Jörg Mey

09.15 – 11.00 Introduction of the students: Elevator Pitches - Coffee (UNS 50, room 1.142A)

11.00 – 12.30 Neuroanatomy I: man & mice
Jörg Mey

12.30 – 13.00 Lunch break (UNS 50, room 1.142A)

13.00 – 14.00 Cerebrovasculature in Health and Disease
Robert van Oostenbrugge

Location: UNS 40, Room C 4.577

14.15 – 15.30 Practical Microscopy I (rodent brain)
Ali Jahanshahi, Jörg Mey and Anand Goswami

15.30 – 16.00 Coffee break (UNS 50, room 1.142A)

Location: Bontezaal, UNS 50, room 1.331

16.00 – 16.40 From ex-vivo to in-vivo histology of human cortex with ultra-high field MRI
Alard Roebroek

16.40 – 17.20 Neuroimaging: new (f) MRI imaging techniques
Walter Backes

17.20 – 18.00 In vivo molecular neuroreceptor imaging
Matthias Bauwens

19.00 Dinner

Programme

DAY 2 | CHAIRMAN: HEIDI JACOBS / JÖRG MEY Tuesday April 4th, 2017

Location: Meetingpoint: UNS 50, room 1.142A

08.30 – 10.00 The group will be split in two groups for site visits:
Group 1: visit to MRI scanner (Prof. Walter Backes)
Group 2: visit to NIBS-Labs (Scannexus)

10.15 – 11.00 Group 1: visit to NIBS-Labs
Group 2: site visit MRI scanner

11.00 – 11.30 Coffee break (UNS 50, room 1.142A)

Location: UNS 50, Groenezaal 0.406

11.30 – 12.30 Neuroanatomy II: Functional System
Jos Prickaerts

12.30 – 13.30 Lunch break (UNS 50, room 2.142)

Macroanatomy - Chairman: Jörg Mey

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

13.30 – 14.30 Macroanatomy of the human brain: dissection human brain, Part 1
Jörg Mey, Jos Prickaerts, Andreas Herrler, Sonja Johann, Harry Steinbusch

14.30 – 15.00 Coffee break (UNS 50, room 2.142)

15.00 – 16.30 Macroanatomy of the human brain: continued, Part 2

16.30 – 17.15 Macroanatomy of the human brain: continued, Part 3

DAY 3 | CHAIRMAN: ALI JAHANSHAHI Wednesday April 5th, 2017

Location: Bontezaal, UNS 50, room 1.331

09.00 – 10.00 Developmental Neurology
Jeroen Vermeulen

10.00 – 11.00 Protein aggregation and Neurodegeneration
Anand Goswami

11.00 – 11.30 Coffee break (UNS 50, room 1.142A)

Location: UNS 40, Room C 4.577

11.30 – 13.00 Practical Microscopy II: neurotransmitter systems
Ali Jahanshahi, Jörg Mey and Anand Goswami

13.00 – 14.00 Lunch break (UNS 50, room 1.142A)

Location: Bontezaal, UNS 50, room 1.331

14.00 – 14.45 Affective disorders: from neuroanatomy to psychopathology
Lies Goossens

Programme

Location: UNS 50, level 0

15.00 – 16.30 Nanoscopy M4I unit: 2 parallel groups; 2 sites: (1) Sample preparation (2) Microscopy
Raimond Ravelli, Carmen López Iglesias, Marie-Helene Lenders

Location: Bontezaal, UNS 50, room 1.331

16.30 – 17.30 **Invited key lecture:** open for other scientists
Neural correlates of unawareness in Alzheimer's disease
Eric Salmon

17.30 – 18.00 Get together - (UNS 50, room 1.142A)

DAY 4 | CHAIRMAN: JÖRG MEY / BORIS KRAMER
Thursday April 6th, 2017

Location: Paarsezaal, UNS 50, room 1.319

09.00 – 09.40 Cognition and Neurodegenerative diseases
Heidi Jacobs

09.40 – 10.20 Functional and structural MRI correlates of cognitive comorbidity in epilepsy
Govert Hoogland

10.20 – 11.00 ALS: from neuroanatomy to psychopathology
Anand Goswami

11.00 – 11.30 Coffee break (UNS 50, room 1.142A)

11.30 – 12.30 Glia
Bert Brône

12.30 – 13.30 Lunch Break (UNS 50, room 1.142A)

Location: UNS 40, Room C 4.577

13.30 – 15.00 Practical Microscopy III: pathology
Anand Goswami / Ali Jahanshahi

15.00 – 15.30 Coffee break (UNS 50, room 1.142A)

Location: Paarsezaal, UNS 50, room 1.319

15.30 – 16.15 Drug development for neurological diseases
Alexander Flohr

16.15 – 17.00 Neuropsychiatric disorders and deep brain stimulation
Yasin Temel

17.00 – 17.45 Neuronal changes during prenatal, postnatal development and 'adulthood' in human brain
Boris Kramer

17.45 – 18.00 Conclusion of the course, plenary discussion and evaluation

Faculty list

- *Prof. Walter Backes*, Faculty of Health, Medicine and Life Sciences, School for Mental Health and Neuroscience, Dept. of Radiology, Maastricht University Medical Centre / w.backes@mumc.nl
- *Dr Matthias Bauwens*, Clinical Radiology, Maastricht University Medical Centre / m.bauwens@maastrichtuniversity.nl
- *Prof. Bert Brône*, Faculty Med. & Life Sci., BIOMED, Neurophysiology lab, University of Hasselt / bert.brone@uhasselt.be
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- *Prof. Yasin Temel*, Faculty of Health, Medicine and Life Sciences, School for Mental Health and Neuroscience, Dept. of Neurosurgery, Maastricht University Medical Centre/ y.temel@maastrichtuniversity.nl
- *Dr Jeroen Vermeulen*, Faculty of Health, Medicine and Life Sciences, Dept. Neurology, Maastricht University Medical Centre / jeroen.vermeulen@mumc.nl

Organization:

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