

Symposium and Workshop on Magnetic Resonance Spectroscopy(¹H-MRS)

April 27-28, 2026

Université Catholique de Louvain

Secteur des sciences de la Santé

Institute of Neuroscience (IoNS) - Neuroimaging platform (NIMA)

DAY 1 (April 27)

MORNING SESSION

8:00 – 8:50 Registration and coffee

8:50 – 09:00 Introduction and welcome (director IoNS)

Methods in ¹H-MRS

09:00-09:30: Principles of MRI Physics (**Lars Hanson, Danish Technical University**)

09:30-10:00: ¹H-MRS: principles (**Fahmeed Hyder, Yale University**)

10:00-10:30: Pulse sequences for ¹H-MRS: from PRESS to semi-LASER (**Ralph Noeske, GE Healthcare**)

10:30-11:00: Coffee Break

Brain Excitation – Inhibition balance

11:00-11:30: Role of GABA in the mammalian brain (**Douglas Rothman, Yale University**)

11:30-12:00: MEGA-PRESS and in vivo assessment of GABA in the human brain (**Nicolaas Puts, King's College London**)

12:00-12:30: ¹H-MRS in neurodevelopment (**Nicolaas Puts, King's College London**)

12:30-13:00: General Discussion

13:00-14:00: Lunch

AFTERNOON SESSION

14:00-17:00: ¹H-MRS data acquisition field trip

DAY 2 (April 28)

MORNING SESSION

8:30 – 9:00 Registration and coffee

Brain Inflammation and Neurodegeneration

09:00-09:30: Neurobiology of brain inflammation Role of inflammation in neurological diseases (**Pietro Maggi, UCLouvain**)

09:30-10:00: Role of inflammation in psychiatric diseases (**Philippe de Timary, UCLouvain**)

10:00-10:30: Diffusion of Brain Metabolites: A Window into Cellular Morphology and Metabolism in Health and Disease (**Itamar Ronen, Sussex University**)

10:30-11:00: Coffee Break

Processing and clinical applications of H-MRS

11:00-11:30: Quantification and analysis software for ¹H-MRS – Part1 (**Richard Edden, Johns Hopkins**)

11:30-12:00: Quantification and analysis software for ^1H -MRS – Part2 (**William Clarke, Oxford University**)

12:00-12:30 Diagnostic ^1H -MRS in the clinic: What are meaningful applications? (**Uwe Himmelreich, Gasthuisberg, KULeuven**)

12:30-13:00: General Discussion

13:00-14:00: Lunch

AFTERNOON SESSION

14:00-17:00: **^1H -MRS data analysis**