

## **MRS Workshop 2018**

## Metabolic Imaging

Accelerated MRSI and reconstruction Pernard Strosse, PhD, Martinos Certire, Boston, USA Consensus discussion MRSI Andrew Maudsley, PhD, University of Miami, Miami, USA Session a - Quality of MRS/MRSI Woderators: Guin Cz   Anke Henning Quality of MRS/MRSI Woderators: Guin Cz   Anke Henning Quality of MRS/MRSI Woderators: Guin Cz   Anke Henning Quality of MRS/MRSI Wolf Rowersty of Volond, Oxford, UK Eycled water-suppression single voxel spectroscopy in cardiac 1H MRS Eycled water-suppression single voxel spectroscopy in cardiac 1H MRS Eycled water-suppression single voxel spectroscopy in cardiac 1H MRS Eycled water-suppression single voxel spectroscopy in cardiac 1H MRS Eycled water-suppression single voxel spectroscopy in cardiac 1H MRS Eycled water-suppression single voxel spectroscopy in cardiac 1H MRS Eycled water-suppression single voxel spectroscopy in cardiac 1H MRS Eycled water-suppression single voxel spectroscopy in cardiac 1H MRS Eycled water-suppression single voxel spectroscopy in cardiac 1H MRS Eycled water-suppression single voxel spectroscopy in cardiac 1H MRS Eycled water-suppression single voxel spectroscopy in a plant of the plant in the pl	Session 2 – MRSI / fast metabolic imaging techniques  Moderators: Peter Barker   Fan Lam		
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Stanislav Motyka, High Field MR Centre, Department of Biomedical Imaging and Image-guided Therapy, Medical University of Vienna, Vienna,

Spectral fitting challenge results (update from 2016) + consensus discussion Gosia Marjanska, PhD, CMRR University of Minnesota, Minneapolis, USA

Session 5 - Applications MRS

## Moderators: Alexander Lin | Joseph Cousins

**Clinical applications** 

Petra Pouwels, PhD, Amsterdam UMC, Amsterdam the Netherlands

**Pre-clinical application** 

Jeanine Prompers, PhD, University Medical Centre Utrecht, Utrecht, the Netherlands

**Clinical applications for Cancer** 

Ovidiu Andronesi, PhD, Martinos Centre, Boston, USA

Papers presentations	
Moderators: Alexander Lin   Joseph Cousins  Deletion of CRTC1 is associated with strong neuroenergetic dysfunctions in a mouse model of mood disorders	
Antoine Cherix, Laboratory for Functional and Metabolic Imaging (LIFMET), Ecole Polytechnique Fédérale de Lausanne, Lausanne, Switzerland	
In vivo longitudinal 1H MRS Study of hippocampal, cerebral and striatal metabolic changes in BDL rats  Dunja Simicic, LIFMET, CIBM, Ecole Polytechnique Fédérale de Lausanne, Lausanne, Switzerland	<b>&gt;</b>
The utility of ultra-high resolution MRSI on detectability of neurochemical changes in multiple sclerosis-related brain lesions	
Eva Heckova, High Field MR Centre, Department of Biomedical Imaging and Image-guided Therapy, Medical University in Vienna, Vienna, Austria	
Early and profound neurometabolic changes in pup rat with cholestatic liver disease compared to changes in adult rats, 1H MRS study	
Veronika Rackayova, LIFMET, CIBM, Ecole Polytechnique Fédérale de Lausanne, Lausanne, Switzerland  Session 6 – MRS outside the brain	
Moderators: Chris Rodgers   Eva Ratai	
<b>Technical challenges of body MRS</b> <i>Martin Meyerspeer, PhD, Medical University of Vienna, Vienna, Austria</i>	
Cardiac MRS	
Ladislav Valkovic, PhD, University of Oxford, Oxford, UK  Muscle and Liver	
Martin Krssak, PhD, MedUni Vienna, Vienna, Austria	
Breast and Prostate Tom Scheenen, Radboud University Medical Centre, Nijmegen, the Netherlands	
Papers presentations  Medicators Chris Padosc   Fire Patril	
Moderators: Chris Rodgers   Eva Ratai  Assessment of perfused ex vivo human livers by MRS and MRI	
Liam Young, OCMR, University of Oxford, Oxford, UK	
Sexual dimorphism and maturation effects in skeletal muscle metabolites:  a proton MRS study	
Lievens Eline, Ghent University, Ghent, Belgium  Myocardial metabolism in amyloidosis quantified by proton MR spectroscopy	
Mareike Gastl, Institute for Biomedical Engineering, University and ETH Zurich, Zurich, Switzerland  Session 7 – Multinuclear MRS/MRI	
Moderators: Wolfgang Bogner   Chloe Najac	
Multi nuclear MRS/MRSI Technical Pierre-Gilles Henry, PhD, CMRR University of Minnesota, Minneapolis, USA	
Multi nuclear MRS/MRSI Applications	
Fei Du, PhD, Harvard University, Boston, USA	
Friday Oct 5 <sup>th</sup>	
Session 8 – MRS in neuroscience and emerging technologies  Moderators: Ben Babourina-Brooks   Rolf Gruetter	
DWS	
Itamar Ronen, PhD, Leiden University Medical Centre, Leiden, the Netherlands  fMRS	
Peter Morris, PhD, University of Nottingham, Nottingham, UK	
PET and MRS Bernard Lanz, PhD, University of Nottingham, Nottingham, UK	
LIFMET, CIBM, Ecole Polytechnique Fédérale de Lausanne, Lausanne, Switzerland  Proferred papers presentations	
Moderators: Ben Babourina-Brooks   Rolf Gruetter	
Integrated Imaging of [11C]-PBR28 PET, MR Diffusion and Magnetic Resonance Spectroscopy in Amyotrophic Lateral Sclerosis  Eva-Maria Ratai, Martinos Center for Biomedical Imaging, Department of Radiology, Massachusetts General Hospital, Charlestown, USA	
Deuterium Metabolic Imaging (DMI), a novel method for in vivo mapping of glucose metabolism in brain and liver Henk De Feyter, Yale University, New Haven, USA	
In-vivo 1H MRS and ex-vivo ESR spectroscopy of Oxidative Stress in a rat model of Chronic Hepatic Encephalopathy Katarzyna Pierzchala, LIFMET, CIBM, Ecole Polytechnique Fédérale de Lausanne, Lausanne, Switzerland	<b>&gt;</b>
Both oxygen supply and phosphocreatine recovery rate show proximo-distal gradients along the human tibialis anterior	
<b>after exercise</b> Linda Heskamp, Department of Radiology, Radboud University Medical Center, Nijmegen, Netherlands	
MRS and the Physiome project In silico models seeking in vivo numbers.  Jeroen Jeneson, PhD, University of Groningen, Groningen, the Netherlands	
Session 9 – Consensus Discussion	
Moderator: Veronika Rackayová	
NMR in biomedicine special issue on Consensus in MRS	