

22nd Annual Scientific Meeting of the BRITISH CHAPTER OF THE ISMRM MOVING QUANTITATIVE MR FROM LAB TO CLINIC

Wednesday 7 - Friday 9 September 2016

The School of Music, University of Leeds, Leeds, UK

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UNIVERSITY OF LEEDS

Conference Programme

Thurs. 8th September*

8.30 – 9.30 am Registration

9.30 – 9.45 am Welcome, introductory remarks, overview

9.45 – 10.10 am Karla Miller, Oxford
Challenges of scale in neuroimaging: Linking diffusion MRI to microscopy

10.10 – 11.00 am **Session O1. Neuro-MR** – chaired by Stuart Currie & Karla Miller

- O1-1. N.P. Blockley (FMRIB, Oxford) - Rapid cerebrovascular reactivity mapping: enabling greater clinical adoption
- O1-2. F.E. Smith (Newcastle MR Centre) - 3D Gradient Echo Imaging of Brain Lithium at 3T in Lithium Treated Bipolar Disorder Subjects
- O1-3. E.H. Bhuiyan (SPMMRC, Nottingham) - Measuring position inside an MR scanner using voltages induced in coils by time-varying gradients
- O1-4. P.L. Hubbard Cristinacce (Centre for Imaging Sciences, Manchester) - Stability of co-electrospun brain-mimicking fibres for diffusion MRI

11.00 – 11.30 am Coffee break (posters available to view)

11.30 – 11.55 am Robert Muller, Mons
Contrast Agents

11.55 – 12.45 pm **Session O2. Alternative contrast mechanisms** – chaired by Steven Sourbron & Robert Muller

- O2-1. C. Burnett (LMBRU, Leeds) - MEASUREMENT OF T1 VALUES FOR SYNOVITIS IN KNEES OF PATIENTS WITH OSTEOARTHRITIS USING A VARIABLE FLIP ANGLE MAGNETIC RESONANCE IMAGING TECHNIQUE AT 3T: A PROSPECTIVE OBSERVATIONAL STUDY
- O2-2. P.W. Hales (ICH, UCL) - Arterial Spin Labelling Provides In Vivo Stratification of Low-Grade and High-Grade Paediatric Brain Tumours
- 92 O2-3. A.K. Featherstone (Centre for Imaging Sciences, Manchester) - CHARACTERISING THE TUMOUR MICROENVIRONMENT AND ITS HETEROGENEITY USING DCE-MRI, OE-MRI, AND DATA CLUSTERING
- O2-4. S. Reynolds (Academic Unit of Radiology, Sheffield) - Detection of Rapid Pyruvate Metabolism in Boar Sperm by Hyperpolarised ¹³C MRS

12.45 – 2.00 pm Lunch break (posters available to view)

2.00 – 2.30 pm Bill Moore lecture – Richard Bowtell, Nottingham
Quantitative magnetic susceptibility measurements in the lab and the clinic

2.30 – 3.30 pm **Poster Pitch Session A**

3.30 – 4.15 pm Coffee break + **Poster Session A**

4.15 – 4.40 pm Dow-Mu Koh, Royal Marsden
MR in Cancer

4.40 – 5.30 pm **Session O3. MR in Cancer** – chaired by Andy Scarsbrook & Dow-Mu Koh

O3-1. J.M. Winfield (Royal Marsden, Sutton) - QUANTITATIVE MRI PARAMETERS CORRELATE WITH HISTOPATHOLOGICAL ASSESSMENT OF NUCLEAR TO STROMAL RATIO AND FAT FRACTION IN RETROPERITONEAL SARCOMAS

O3-2. T.A. Roberts (CABI, UCL) - IMAGING CELL SIZE RESPONSE TO CHEMOTHERAPY IN A MOUSE MODEL OF GLIOMA USING VERDICT MRI

O3-3. R. Speight (Leeds Cancer Centre) - Can brain radiotherapy treatments be planned using MRI as the primary imaging modality?

? M O3-4. J. Freedman (ICR, London) - 4D T2 weighted MRI for Radiotherapy Treatment Planning

*M2 linac - motion planning.
New area for M2.*

5.30 – 6.00 pm Annual General Meeting of the British Chapter of the ISMRM.

7.00 for 8.00 pm Dinner at Leeds Museum.

Fri. 9th September*

9.15 – 9.40 am Sue Francis, Nottingham
Body MRI: renal and liver imaging

9.40 – 10.30 am **Session O4. Quantitative MR in the body** – chaired by Dan Wilson & Sue Francis

O4-1. H.-F. Chan (Academic Unit of Radiology, Sheffield) - 3D Whole Lung Morphometry Mapping with ¹²⁹Xe MRI and Compressed Sensing: Comparison with ³He

O4-2. H. Rogers (ICH, UCL) - Intravoxel Incoherent Motion Provides the Best Fit to DWI Data Acquired in Paediatric Wilms Tumour

Use data. Extend this paper with
O4-3. J.D. Biglands (UMBRU, Leeds) - Measurements of fat content and diffusion parameters in healthy muscle

O4-4. J.J. Connell (CABI, UCL) - MONITORING LIVER FIBROSIS DISEASE PROGRESSION AND RESOLUTION WITH CELL THERAPY

Following with long research. Not achieved.

10.30 – 11.00 am Coffee break (posters available to view)

11.00 – 12.00 pm **Poster Pitch Session B**

12.00 – 1.15 pm Lunch + **Poster Session B** (12.30 – 1.15 pm)

British Chapter of the ISMRM committee meeting (12.45 – 1.15 pm).

1.15 – 1.40 pm Stefan Neubauer, Oxford
Novel Quantitative Approaches to Cardiac MR (CMR)

1.40 – 2.30 pm **Session O5. Cardiovascular MR** – chaired by John Ridgway & Stefan Neubauer

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- ← O5-1. T.W. Okell (FMRIB, Oxford) - Combined Angiography and Perfusion using Radial Imaging and Arterial Spin Labeling: Preliminary 4D Results
 - O5-2. J. Yuan (Dept. of Radiology, Cambridge) - 3D black blood T2 mapping of the carotid artery wall with compressed sensing and data-driven parallel imaging *Quite involved a methodology?*
 - O5-3. D. Savic (Physiology, Oxford) - Assessment of the Progression of Type 1 Diabetes on Cardiac Metabolism and Function: A Hyperpolarized ¹³C MRS and CINE MRI Study. *Biological test with ¹³C.*
 - ✓ O5-4. D. McClymont (Cardiovascular Medicine, Oxford) - DIFFUSION KURTOSIS MODELING IN EX-VIVO CARDIAC MRI *- In vitro rather than in vivo.*

2.30 – 3.00 pm Coffee break (final opportunity to view posters)

3.00 – 3.25 pm Mark Lythgoe, UCL
Enhancing the impact of preclinical MR in the UK

3.25 – 4.15 pm **Session O6. Pre-clinical MR** – chaired by Sven Plein & Mark Lythgoe

- O6-1. N. Zarghami (Oxford Institute for Radiation Oncology) - Evaluation of bSSFP3D sequence to detect micron-sized paramagnetic iron oxide in a brain cancer model
- ← O6-2. B. Jordan (CABI, UCL) - Non-Invasively Assessing the Microstructural Changes in Tissue Post-Fixation using VERDICT MRI.
- O6-3. J.R. Larkin (Oxford Institute for Radiation Oncology) - Multiphase pCASL for imaging blood flow in rodent brains
- ← O6-4. A.J. Kennerley (Pre-clinical MRI Facility, Sheffield) - The Pain of Pre-Clinical fMRI

4.15 – 4.45 pm Awards presentation and close.

* 5 Royal College of Radiologists CPD credits are available for each day of conference attendance including the workshops on Wed. 7th Sept.