Scientific Programme

7th Annual Meeting of the British Chapter of the ISMRM

Thursday 13th September 2001

08.45 – 09.15 **Coffee**

09.15 – 09.30 Opening of the meeting and introduction on behalf of the University of Cambridge **Dr David Lomas**

09.30 – 10.30 **Bill Moore Lecture:** Studying Cancer with MRS & MRI **Prof John Griffiths**

10.30 - 12.30 **Session 1: Oncology and Spectroscopy**
Chair: Dr Kevin Brindle

10.30 – 10.50 **Invited Speaker :** MR screening in breast cancer **Professor Martin Leach**

10.50 – 11.10 **Invited Speaker :** DNA replication and its exploitation for cancer diagnosis and screening **Professor Ron Laskey**

Contributing papers:

11.10 – 11.25 In Vitro MRS investigation of phosphocholine metabolism in *ras* transformed NIH3T3 fibroblasts **Mounia Beloueche**

11.25 – 11.40 Proton Magnetic Resonance Spectroscopy in the Investigation of Alzheimer's Dementia: a real clinical application at last? **Adam Waldman**

11.40 – 11.55 In vivo MR studies in a transgenic mouse model of Huntingdon's disease **RA Page**

11.55 – 12.10 Neurochemical surrogate markers of brain tissue compromise: An in vitro MRS and HPLC study of perfused cortical brain slices **Robert C Tasker**

12.10 – 12.25 Comparison of polarization transfer schemes for application to P MRS studies **L Mancini**

12.30 – 13.30 **LUNCH**

13.30 – 15.30 **Session 2 - Cardiovascular**
Chair: TBA

13.30 – 13.50 **Invited Speaker:** Thrombus Imaging
Dr Alan Moody

13.50 – 14.10 **Invited Speaker:** MRA
Mr Martin Graves

Contributing papers:

14.10 – 14.25 High-resolution MR of carotid atheroma: a non-invasive tool for assessing plaque morphology and potential risk?
Jonathan H Gillard

14.25 – 14.40 Temporally resolved 3D Phase-Contrast for the study of Wall Shear Stresses in the carotid artery
I Marshall

14.40 – 14.55 A Model for Flow Quantification using Echo Planar Imaging (Spin Echo) in Simple and Complex Flow Regimes
TA Sucharov

14.55 – 15.10 The assessment of fetal and maternal blood flow to the placenta using FAIR EP1
B.Jackson

15.10 – 15.25 Fast T1 Measurement for Quantitative Cardiac Perfusion Applications
DM Higgins

15.30 – 16.00 **COFFEE**

16.00 – 18.00 **Session 3: Image Processing**
Chair: TBA

16.00 – 16.20 **Invited Speaker:** Brain connectivity mapping using DTI
Dr Geoff Parker

16.20 – 16.40 **Invited Speaker:** CV Analysis
Dr Guang Yang

Contributing papers:

16.40 – 16.55 pq diagrams: A new method for tissue characterisation of magnetic resonance diffusion tensor imaging (DTI) data
Alonso Pena

16.55 –17.10 Optimal combination of signals from array coils using image based estimation of coil sensitivity
M.Bydder

17.10 – 17.25 K-Space Motion Artefact Detection and Correction
D. Atkinson

17.25 – 17.40 Reconstruction after irregular and under sampling due to rotational motion
David Atkinson

17.40 – 17.55 Is quantification of bolus tracking MRI reliable without deconvolution?
J. Perthen

19.30 **DRINKS RECEPTION**

20.00 **CONFERENCE DINNER**

Friday 14th September 2001.

Session 4a

09.00 – 11.00	**fMRI** **Chair: Professor E Bullmore**
09.00 – 09.20	**Invited Speaker:** fMRI of the human visual system **Dr Krish Singh**
09.20 - 09.40	**Invited Speaker:** Towards quantitation in fMRI **Dr Peter Jezzard**

Contributing papers:

09.40 – 09.55	Towards the Direct Detection of Neuronal Activity the Brain **D.Konn**
09.55 - 10.10	Which aspect of fMRI BOLD signals best reflects the underlying electrophysiology in human somatosensory cortex? **OJ Arthurs**
10.10 – 10.25	A Direct Cortical Stimulation Model for rodent fMRI **V. Austin**
10.25 – 10.40	Pharmacological fMRI: identifying drug-induced modulation of pain-related brain activity using a pharmacokinetic model **Richard Wise**
10.40 – 10.55	5-HT Modulation of Behavioural inhibition and Localised Brain Activation. A functional and Pharmacological MRI study **L.Clarke**
11.00 – 11.30	**COFFEE**

Session 4b

09.00 – 11.00	**MSK** **Chair: Professor A K Dixon**
09.00 – 09.20	**Invited Speaker:** New methods in MSK MR **Prof Graham Bydder**
09.20 – 09.40	**Invited Speaker:** Investigating arthritis with MRI **Dr John Waterton**

Contributing papers:

09.40 – 09.55	A Novel RF Coil configuration for in-vitro imaging of arthritic rabbit knees **Dr A Tasos**
09.55 – 10.10	MR imaging of the wrist:effect on clinical diagnosis and patient **Prof A Dixon**
10.10 – 10.25	Three dimensional MRI of osteoarthritic equine carpal joints **Dr A Tasos**
10.25 – 10.40	Muscle oxygenation and ATP turnover studied by P MRS and NIRS **GJ Kemp**
10.40 – 10.55	Non invasive punch biopsy of human knee articular cartilage **Dr Jo Burge**
11.00 – 11.30	**COFFEE**

Session 5

11.30 – 12.30	**How I do it** **Chair: Dr D J Lomas**
11.30 – 11.50	**Invited Speaker:** Design and test new pulse sequences **Dr Gareth Baker**
11.50 – 12.10	**Invited Speaker:** Build you own MRI system **Prof. Martyn Paley**
12.10 – 12.30	**Invited Speaker:** Build an MR coil **Dr Paul Glover**
12.30 – 13.30	**LUNCH**

Session 6a

13.30 – 15.30	**Body MRI** **Chair: TBA**
13.30 – 13.50	**Invited Speaker:** MR of GI tract function **Dr Penny Gowland**
13.50 – 14.10	**Invited Speaker:** Rectal MRI staging **Dr Gina Brown**

Contributing papers:

14.10 – 14.25	EPI measurements of meal accommodation and comparison of gastric function Assessed with gamma scintigraphy and intraluminal manometry: application to a clinical trial of a novel 5-HT3 receptor agonist. **L.Marciani**
14.25 – 14.40	High Definition Imaging at 3 Tesla using a Body RF Coil **Steve Roberts**
14.40 – 14.55	Interactive Real-time MRCP: Technical Performance Evaluation **Lomas DJ**
14.55 – 15.10	Interactive blood suppressed single shot Fast Spin Echo/cardiac imaging **Dr M Makki**

15.10 – 15.25

15.30 – 16.00 **COFFEE**

Session 6 b

13.30 – 15.30 **Hardware and Pulse Sequences**
Chair:

13.30 – 13.50 **Invited Speaker:** Challenges in the construction of wide bore high field imaging magnets
Dr John Bird

Contributing papers:

13.50 – 14.05 Optimising the signal to noise ratio in Double Quantum CRAZED imaging
Jose Pedro Marques

14.05 – 14.20 Spin Echo Entrapped Perfusion Image (SEEPAGE): Validation of Theory
Lowri Cochlin

14.20 – 14.35 Rapid Simultaneous Mapping of T2 and T2* by Multiple Acquisition of Spin AntiGradient Echoes using Interleaved Echo Planar Imaging (MASAGE-IEPI)
David L.Thomas

14.35 – 14.50 Magnetic Array Coil Simultaneous Imaging (MACSI)
K J Lee

14.50 – 15.05 Preliminary Experiments with a Novel Technique for Visualising Sub-pixel Structures
D.Carmichael

15.05 – 15.20 k-Space Filtering Effects in 2D Gradient Echo Hyper-polarised 3He MRI
Jim M Wild

15.30 – 16.00 **COFFEE**

Session 7 (option 1)

16.00 – 18.00	**Perfusion/Diffusion** **Chair: Dr J Gillard**
16.00 – 16.20	**Invited Speaker:** Principles of Perfusion and Diffusion **Prof Mike Peters**
16.20 – 16.40	**Invited Speaker:** Perfusion and Diffusion applications in the brain **Dr Fernando Calamante**

Contributory papers:

16.40 –16.55	Diffusion Tensor Imaging of Brain Tumours at 3 Tesla: A Potential Tool for Differentiating High Grade Gliomas from Low Grade Tumours and Metastases? **Stephen J Price**
16.55 – 17.10	Abnormal cerebral blood volume in regions of contused and normal appearing brain following traumatic brain injury using perfusion magnetic resonance imaging **Matthew R Garnett**
17.10 – 17.25	MRI Correlates of Injury After Cortical Contusion **M F Lythgoe**
17.25 – 17.40	Characterisation of a Delayed Type Hypersensitivity Lesion in the Rat Brain Using MRI **Kerry Anne Broom**
17.40 – 17.55	A novel reversible, remote-controlled three vessel occlusion in the Sprague Dawley rat – for NMR studies **DA West**

CLOSE

POSTERS

MR Perfusion imaging in moyamoya syndrome Potential implications for clinical evaluation of occlusive cerebrovascular disease

F.Calamante

MRI measurement of the pharmacokinetics-pharmacodynamics of remifentanil

Richard Wise

Stereotactic MR Imaging for planning neural transplantation. A reliable Localising technique at 3T?

Tim Donovan

Mohr circles: a new visualisation method for magnetic resonance diffusionTensor imaging data **Alonso Pena**

A functional magnetic resonance imaging battery for preoperative mapping of Motor, motor planning and language function in the cortex

S. Gustard

Fast Two-dimensional MR Imaging by Multiple Acquisition with Micro B0Array (MAMBA) **K J Lee**

Signal to Noise Ratio and Echo Spacing in Echo Planar Imaging

Ioannis Delakis

Enhanced sensitivity of diffusion tensor imaging in acute stroke using pq diagrams: a new methodology to improve tissue characterisation

Hadrian AL Green

Contrast Based Perfusion Imaging in Pathological Tissue: A Monte Carlo Simulation Study **Andrew M Blamire**

Long Term QA of proton chemical shift imaging (CSI)

Ian Marshall

Reproducibility of short echo MR spectroscopy in vitro

E A Moore

Harmonic Phase (HARP) Analysis of Geometric Distortions

R S Nicholas