

**Chairman**  
Tony Lacey/Geoff Parker

**Date**  
16 February 2005

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**Participants**  
AstraZeneca  
Lars E Olsson (Möln达尔)  
S Young (Charnwood)  
Nigel Boughton-Smith (Charnwood)  
Anders Andersson (Södertälje)  
Christian Spenger (Södertälje)  
Helen Young (AP)  
Tony Lacey (AP)  
John Waterton (AP)

**Secretary**  
Jo Naish (ISBE)

U of Manchester

Chris Taylor  
Judith Adams  
Steve Williams  
Geoff Parker  
Charles Hutchinson  
Jo Naish  
Deidre McGrath

**Meeting date**  
10 February 2005

**Location**  
7G2

**Subject**  
AstraZeneca / University of Manchester strategic  
alliance in biomedical imaging / image analysis

**Reference**  
meeting

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## 1. Welcome

- The new SA RA, Deidre McGrath was introduced

## 2. Matters arising from 11<sup>th</sup> meeting

- no progress on investigating role of NO in pannus/ lung. NBS stated that NO production is related to inflammation and could provide a promising biomarker in RA/OA More AZ interest in NO in RA than in lung.
- TL has provided AA with list of CNS contacts in ISBE (not followed up yet)
- No discussion yet within AZ on SW proposed project 41 (plus see section 5)
- see section 4 for status of publications

## 3. Status of open projects

- 34 OA at 3T: JN stated that initial finding at 3T were that WE sequence probably optimum (higher SNR efficiency than FS, balanced FFE suffered from inhomogeneity related artefacts). Suggested using OAI data for a future project. JW to check timescales. JW stated that still need for data collection to cover earlier timepoints and other vendors since OAI minimum timept 1 year and Siemens only. CT suggested feasibility study, image ~10s OA patients with OAI protocol, develop automated bone segmentation. JN, CT, CH, JW to work up proposal (JW to feed back to NBS and AZ Joints Imaging Group).
- 21 Thickness mapping of articular cartilage in the hip: JN presented a report on progress. Project near to completion- results presented for 2 individuals, in both cases small increase in thickness after non-weight bearing period observed. Remaining work is in completing cartilage segmentations. JN to provide results to JIG once obtained for all 6 individuals. Presented initial findings at 3T. CH commented could increase scan time. JW stated not mandatory to separate cartilage layers. Forward look: map signal intensity.
- 26 Contrast enhanced MRI in IBD: GP explained that Karl Embleton no longer funded for this project but has submitted grant proposal to Wellcome Trust. Agreed this project will be parked until outcome of this application is known at which point GP will initiate telecon between GP, TL, LO to discuss way forward.
- 37 MRS capability: project under SA for legal aspects of relationship, not funded. Collaboration between Dave Williamson and Jean Tessier. SW concerned that no progress will be made now DW left ISBE (but still employed by UoM), suggested may not need much of DW's time to find out whether worth pursuing at which point project could be brought into SA. JT to make contact with SW. LO to find out if any interest within AZ CV imaging group.

- 38 OE MRI in COPD: SY explained situation within AZ regarding funding. Experimental medicine group disbanded last year, interim group showed lots of interest but had no funding. New initiative- discovery medicine- now in place, slow movement in funding but nothing possible within 6 months. GP commented on loss of good will with clinicians at Wythenshaw due to long delay. SY to contact Jurgen Vesbo to explain situation and to keep engaged. JW commented that increasing understanding within AZ for need for biomarker development studies. May be targeted as therapy area- emphasis on short term (~weeks) drug induced changes i.e. vascular shifts as oppose to remodelling so that measurements of regional ventilation, hypoxia and oxygenation likely to be important. Agreed small scale COPD evaluation using SA resources should go ahead as in original project plan.

#### **4. Status of publishing projects**

- 3 Rheumatoid pannus in the hand: manuscript completed ~1 year ago but question over how many patients changed medication during trial. JA questioned need for clinical info in method paper. JW to sort out clinical info or rewrite paper to omit reference to medication.
- 4 CSF flow in cerebral aqueduct: Alan Jackson to complete asap. JW stressed importance of generating publications if funding is to be secured for a continuation of the SA.
- 5 DCE-MRI in the non-malignant lung: part of paper on tumour study outside of SA. GP to complete.
- 17 Mapping hydration in knee cartilage: JW to provide JN with paragraphs, JN to combine with reworked MICCAI paper.
- 23 OE-MRI in lung: revised paper submitted to MRM, waiting to hear back from one of referees.

#### **5. Project proposals and future look**

- 44 OE imaging outside lung: DM presented initial results using images from lung project. Oxygen uptake observed in spleen but not liver in agreement with literature. Also observed in skeletal muscle in contradiction to literature. JW suggested short note on observation in muscle. GP outlined interest in applying method to tumour studies. DM to carry out search of oncology literature.

- 39 NO-fMRI: SW outlined proposal. CS indicated strong scientific interest but not clear how would relate to AZ projects. JW suggested further discussion should take place between SW and AZ CNS (CS, AA).
- 43 CT-MRI comparison: HY discussed AZ interest in comparing techniques as both are used in ongoing clinical trials. GP outlined academic interest in determining magnitude of confounding effects in MRI (i.e. using CT as gold standard). No clinician currently on board. Patient recruitment may be difficult and extra regulatory approval will be required. JA offered to provide contacts with radiologists at Christie (e.g. Bernadette Carrington).
- 42 AIF rat analysis: GP outlined proposal and discussed similar work in ISBE outside SA using clinical data. TL discussed AZ interest in overcoming issues with acquisition of AIF pre-clinically. Possibility to use SA resources for rat data.
- 36 Gut motility: LO indicated AZ interest. Agreed to put on hold along with project 26.
- 28 ASM segmentation hippocampus: JN outlined proposal. CT added that Mike Weiner is engaged and could be a potential collaborator. CS indicated AZ strong interest in developing structural assessment in CNS and would like further discussion.
- Future look, MR in pancreas: GP commented this is feasible. CH to work up proposal for next meeting.

## **6. Workplan for 2005**

- see spreadsheet

## **7. Date and venue of next meeting**

- AZ Alderley Park, 10 June 2005, 13:00 – 16:00

## **8. AOB**

- none

**Summary of actions**

name	action	due date
JW	Check timescales for OAI	
JN,CT,CH,JW	Work up project proposal for automated bone segmentation in OA using OAI data and own scans	June 05
JN	Work up project proposal for SI in hip	June 05
JN	Provide results from hip project to JIG when complete, then draft paper	March 05
JT, SW, LO	Consider whether to work up project proposal based on DW MRS collaboration	June 05
GP	Initiate telecon on IBD project with TL,LO	Once outcome of Wellcome grant proposal is known
SY	Simon or Tim Higenbotham to contact Jurgen Vesbo to explain funding situation re COPD study	
JN, GP	Sort out ethics permissions for COPD patient study	June 05
JW	Circulate completed pannus paper	10 March 05
JW	Work with JA and CH on second RA (bone lesions) paper	June 05
AJ	Complete CSF paper	??? (ASAP)
GP	Complete lung DCE-MRI paper	mid March
JW	Provide JN with paragraphs for cartilage hydration paper	15 Feb 05
JN	Write up cartilage hydration paper	end March 05
DM	Search oncology literature for effects O2 breathing	end Feb 05
JA	Speak to Bernadette Carrington re dynamic CT/MRI comparison	March 05
GP, HY	Engage clinician and look into required paperwork for CT-MRI project	June 05
TL	Organise CNS satellite meeting to explore further proposals 39 (NO-fMRI) and 28 (ASM hippocampus segmentation)	
CH	Work up project proposal for MRI in pancreas	June 05
TL	Email monthly action log	monthly
JN, DM	Formulate more detailed workplan	End Feb 05