

## QIBA fMRI Bias Work Group Call

Tuesday, February 19, 2013 at 10 AM CT

Call Summary

*Additional Notes provided by Dr. Voyvodic*

### Participants

James Voyvodic, PhD (Chair)

Barbara Croft, PhD

Ted DeYoe, PhD

Feroze Mohamed, PhD

Jay J. Pillai, MD

Laura Rigolo, MS

David Soltysik, PhD

Daniel Sullivan, MD

Domenico Zaca, PhD

### RSNA

Joe Koudelik

Julie Lisiecki

### Discussion

- Discussion focused on Blockley et al. review on “calibrated fMRI”, led by Dr. Feroze Mohamed.
- The Davis model for quantitative BOLD involves understanding CBF/CBV and CMRO2
  - These properties depend on many factors, some of which can be estimated, others measured
  - Calibration involves performing test scans based on hyper/hypocapnia
- Calibration is thus aimed at understanding the relationship between vascular reactivity and BOLD
- How valid is author’s claim that this type of calibration is essential for quantitation?
- How does this relate to the relationship between neural activity and vascular reactivity (and BOLD)?
- Need to look closer at how calibrated fMRI is used to measure brain, as opposed to vascular, function

### Next steps

- Continuation of article review on next call – March 5<sup>th</sup>
- Focus on pros and cons of what practitioners are actually doing in clinical practice
- Volunteers are requested to read 1 to 2 articles and provide a 5-minute summary of key points
- *(Please refer to specific assignments below).*

Reviewer(s)	Article (as abbreviated on Index provided)
Dr. DeYoe	MRI_Gu_NeurovascularCouplingVision2005.pdf
Drs. Carson and Pillai	MRM_Wu_CBV_CBF_BBB_PASL_VASO_2010.pdf
Drs. Mohamed & Zaca (Dr. Pillai)	NMRBiomed_Blockley_Calibrated_fMRIreview_2012.pdf
Dr. Petrella	Radiol_RosenQuant_fMRI_2011.pdf

### Next calls:

- QIBA fMRI Technical Committee, *Wednesday, February 27, 2013 at 11 am CT*
- QIBA fMRI Bias Working Group, *Tuesday, March 5, 2013 at 10 am CT*