Reviewer's report

Title: Test-Retest Variability of High Resolution Positron Emission Tomography (PET) Imaging of Cortical Serotonin (5HT2A) Receptors in Older, Healthy Adults

Version: 2 Date: 12 October 2008

Reviewer: David Reutens

Reviewer's report:

This is a straightforward study in which test retest reliability for setoperone is assessed in 6 subjects over the age of 60 after intervals of 5-16 weeks. A single method of kinetic analysis was used, the simplified reference tissue method, using time-activity curves obtained from regions of interest. Statements are made about differences between ICCs in different regions but these are not subjected to statistical examination. Sample size may be too small to find significant differences.

Major Compulsory Revisions
1. Are the differences between regions statistically significant?
2. Please provide confidence intervals for the ICCs
3. Please provide greater information on the regions of interest (e.g. volume)
4. Please list time between scans for the subjects
5. The authors suggest that partial volume effect may have contributed to low ICC in the cingulated. From the T1 weighted MRI could they provide information on proportion of grey, white and CSF in each of the ROIS.

Discretionary Revisions
1. It would be interesting to examine other methods of kinetic analysis and other brain regions.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.