Reviewer's report

Title: Evaluation of emotion processing in HIV-infected patients and correlation with cognitive performance

Version: 1 Date: 6 November 2012

Reviewer: Keith Laws

Reviewer's report:

Evaluation of emotion processing in HIV-infected patients and correlation with cognitive performance Baldonero et al

Minor essential revisions

1) I would like to see the effect sizes for each face emotion and other comparisons.

2) The effect for fear is exceptionally large (especially compared to the others and therefore really quite striking) But the variability (SD) for fear in the HIV group (compared to controls and for HIV on other emotions) suggests there may be a cluster of very low performing individuals.

3) Although ns, a moderate effect size of 0.49 for surprise suggests some possible power issues - moreover, the controls identified fewer surprised faces than the HIV group.

4) I would like to see the global score (for all 6 emotions) included in Table 2 (with analysis)

5) Lane et al (2012) Facial Emotional Processing in HIV Infection: Relation to Neurocognitive and Neuropsychiatric Status. Neuropsychology Vol. 26, No. 6, 713–722 - needs to be referenced They showed that the speed of processing fear emotion is affected in HIV+ individuals; and that recognition of the fear expression is not impaired when all HIV individuals are concerned, but is found to be impaired in neurocognitively impaired HIV persons.

6) Please complete df fully in stats.

7) P.8 states " Overall, 23.2% of the patients showed an ANI, as assessed by the neuropsychological battery; the others 86.8% showed no cognitive impairment" - These figures cannot be correct.

8) More detail about the regression analyses is required - e.g. what does HIV infection mean? How is it composed?

9) Figures - all figures with bar charts need to indicate what the bar charts are measuring (e.g. SD, SE, 95% CI).

10) It is unfortunate that the Zung depression scale was not administered to the controls - can the authors eliminate the possibility that depression is an issue?; also it is clear from the mean and SD that the depression scores are heavily skewed i.e. a subgroup would seem much more depressed - doe sthis impact
11) It seems quite feasible that a lack of correlations for happiness (the only emotion to not correlate with anything) almost certainly reflects the ceiling level performance obtained and should be discussed.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

'I declare that I have no competing interests'