Reviewer’s report

Title: ADHD and Disruptive behavior scores are associated with MAO-A and 5-HTT genes and with platelet MAO-B activity in adolescents

Version: 2 Date: 18 June 2007

Reviewer: Anita Thapar

Reviewer’s report:

General
This is a paper from a very good, highly productive research group. The paper is clearly written.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
1. The authors undertake a candidate gene association study for ADHD, ODD and CD defined categorically and dimensionally, using a twin sample. Analysis is undertaken on pairs and then S.E. corrected. However MZ twin pairs are genetically the same, why include both? It does not seem sensible to have analysed the data in this way. It is recommended that the analysis is undertaken on a sample composed of one twin from each pair then replicated in the other sample of co-twins.
2. Page 5 Blood samples were obtained from 247 individuals—from how many pairs?
3. How were parent and child reports from interview integrated for each type of psychopathology?
4. Page 10 The gender ratio of ADHD combined type is much lower than in other studies (male: female 7,8:1 in non referred, 3,4:1 in referred populations). Can the authors explain this? Was it attributable to the way information was integrated across informants?
5. Page 11-MAOA VNTR 66% of the subjects. "Hemizygous". Do the authors mean homozygous?
6. Page 13 Confounders for MAOA B activity. Could there be other confounders additional to smoking?
7. Conclusions. The authors need to highlight findings of meta-analyses as a number have now been published on ADHD and these variants. This provides the reader with a context to the findings from this paper. Are they likely to be false positive, false negative? How do they compare with findings from meta-analyses? What does their own study add to previous findings? For example, Faraone et al, 2005 on ADHD and MAOA and 5HTT variants. Kim-Cohen et al, 2006-meta-analysis showing no main effect of MAOA variant on antisocial behaviour

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Discretionary Revisions (which the author can choose to ignore)

What next?: Reject because scientifically unsound

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
I declare that I have no competing interests