Reviewer's report

Title: Association study of SHANK3 gene polymorphisms with autism in Chinese Han population

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Reviewer: Roberto Giorda

Reviewer's report:

Major Compulsory Revisions

The authors have analyzed several SNPs in the SHANK3 gene for association with autism in 305 Chinese Han families, and found no association. They refer to additional experiments of high-throughput genotyping on 240 trios showing no copy-number variations in and around the SHANK3 gene. In my opinion, these data should be incorporated in the present report, as they complete the genetic analysis of the region. I would also recommend testing whether the Affimetrix 5.0 chip is able to detect the small recurrent deletion described by Bonaglia et al, 2006, Durand et al, 2007, and others.

Minor Essential Revisions

The authors point out in their Discussion that the association between SHANK3 dosage and autism is controversial. I would suggest that the 22q13 deletion syndrome has a clinical phenotype overlapping in part the ASD phenotype, and sometimes subjects with 22q13 deletion are included in ASD cohorts. Choosing autistic patients with stricter criteria may help to exclude 22q13 deletion patients from the study group.

On the other hand, SHANK3 haploinsufficiency has been definitely associated with the major clinical signs of 22q13 deletion syndrome in over 300 subjects, while the cases described by Wilson and colleagues are exceedingly rare. The authors should rewrite this paragraph accordingly.

Discretionary Revisions

Although the style of the paper is generally clear and readable, there are a few unusual sentences (e.g. Page 3, last line) and several grammatical errors.

Level of interest: An article of importance in its field

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.