Reviewer’s report

Title: Mutation screening of melatonin-related genes in patients with autism spectrum disorders

Version: 2 Date: 7 January 2010

Reviewer: Valerie Hu

Reviewer’s report:

No revisions required.

Comments:

There is increasing interest in the circadian rhythm genes as potential susceptibility genes for autism. This manuscript describes several new rare mutations in melatonin-related genes that may be related to autism.

The authors add to their previous study on genetic variation in ASMT by confirming the reported rare splice mutation in ASMT (IVS5+2T>C) in another cohort of patients as well as by describing several other rare mutations in melatonin-related genes. Although 4 of the new mutations are observed in only 1 out of 109 cases, the authors recognize this limitation by stating that their “study sample is too small to conclude that mutations in melatonin related genes are enriched in patients with ASD”. What is more interesting is their finding that 2 variants in the ASMT gene are in the upstream regulator regions of the gene. As level of ASMT transcript has been demonstrated by this same group to be associated with lower melatonin levels, it would be of particular interest to determine if the new mutations regulate ASMT expression. Likewise, rare mutations in the melatonin receptor genes may have some relevance if transcription factor binding sites or expression level are affected.

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

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.