Reviewer's report

Title: The association of HLA-DQB1, -DQA1 and -DPB1 alleles with anti-GBM disease in Chinese patients

Version: 1 Date: 27 January 2011

Reviewer: Dimitri S Monos

Reviewer's report:

Luo H et al report the protective effect that the HLA-DPB1*0401 allele may have in the development of GBM disease. The same group has previously published on the association of HLA-DRB1*1501 with GBM in the Chinese population. The same DRB1 association was previously reported in Caucasians and Japanese by other groups. It is an interesting study since they have expanded the search for association to the other relevant class II loci DQ and DP for a disease that a DRB1 association has already been established. The study is well performed but there are some issues with the data analysis and presentation.

Major Compulsory Revisions:

It appears that this population is the same population studied when they previously reported the DRB1 association. If indeed it is so, the recent work needs to be presented in the context of these findings as well. The authors need to evaluate whether individuals characterized by the combined presence of DRB1*1501 and absence of DPB1*0401 have an even higher risk, whether there are any individuals with both alleles present, discuss these findings depending on the genotypes of the different individuals and emphasize the DP, DR relationship.

Furthermore the subjects of this study have been typed at the high resolution level and it would be worth it to examine the association not only at the allele level but also at the amino acid level. There are software programs that can facilitate this analysis; see (Kanterakis et al SKDM HLA Tool: A Comprehensive HLA and Disease Associations Analysis Software. Human Immunol. 69: 522-525, 2008). That may reveal individual residues of importance rather than individual alleles.

The authors in the Results section mention that in their population of 244 individuals they have identified 11 DQB1, 9 DQA1 and 38 DPB1 alleles. However in Table 1 they only report the frequency of only a limited subset of alleles for each of these loci. Why? They should prepare a table for each of the loci with all of the alleles identified in their population. A somehow related point. The p corrected value for the DPB1*0401 is multiplied by a factor that is not 38 as the number of reported DPB1 alleles. Why?

Level of interest: An article of importance in its field
Quality of written English: Needs some language corrections before being published

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