Reviewer's report

Title: HLA-DR and HLA-DQ alleles in patients from the south of Brazil: markers for leprosy susceptibility and resistance

Version: 2 Date: 30 March 2009

Reviewer: Milton O Moraes

Reviewer's report:

1) The authors in the introduction stated that “WHO classifies leprosy patients into three groups. Patients presenting a single skin lesion are classified as single-lesion paucibacillary cases, all cases presenting five or fewer skin lesions are classified as paucibacillary leprosy (PB) and patients presenting six or more skin lesions plus detectable M. leprae are classified as multibacillary (MB) cases.”

I guess that WHO does not use, for treatment purposes, the detection of M. leprae in MB patients. Only skin lesions are used. Also for treatment, WHO does not distinguish single lesions or PB patients. A reference needs to be added and amendments (if any) need to be made.

2) One of the points raised in the first review concerned classification of patients. Now, it is clear by the authors’ answer that they do not use R&J classification since they do not have BT, BB, and BL patients. Although this classification (probably Madrid) does not impact drastically the results, it is strongly suggest a careful revision of patients classification in view of R&J. It is necessary to further compare the results with other papers published in the literature not only for this paper but also for other data generated with these DNA samples.

3) Also, authors failed to support evidences of why they choose to compare LL vs TT; LL vs controls; TT vs controls and controls vs patients. It is important to notice that all these comparisons introduce bias and needs an extra level of Bonferroni correction in a way that all P values needed to be correct with increased stringency. Thus, it would be easier to compare only PB vs MB patients (because this includes the large proportion of borderline patients) and controls vs. patients. If authors choose to maintain the analyses as it is, they need to present P-corrected for extra comparisons. Authors should state in the introduction or in the discussion their hypothesis of leprosy resistance and susceptibility to support their choice of comparisons.

4) The authors mentioned that the high resolution PCR-SSP typing was used only to alleles DRB1*. SSO-Luminex kit (LABType SSO DQA1/DQB1, RSSO2Q, One Lambda) is considered to be low/median resolution typing method.

5) English still needs minor revision

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

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

'I declare that I have no competing interests'