Reviewer’s report

Title: Clinical and genetic markers associated with tuberculosis, HIV-1 infection, and TB/HIV immune reconstitution inflammatory syndrome outcomes

Version: 0 Date: 08 Jun 2019

Reviewer: Vijaya Lakshmi Valluri

Reviewer's report:

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In the present study, the distribution and role of HLA-B and KIR genes in TB and/or HIV-infected patients in the Brazilian general population and occurrence of TB/HIV-IRIS was investigated. The study presented here has some concerns with respect to the experimental approach and presentation.

Comments:
1. As the authors point out, the sample size is low to arrive at any conclusion about the association of the HLA or KIR alleles. This issue needs to be addressed. Higher frequencies of these alleles mentioned in the cohort could be due to un-uniform sample numbers. HIV/TB IRIS group might be hard to find, but samples can be included in the HIV and TB groups. If possible additional samples can be added to the other groups for a uniform N across the groups.
2. The authors need to include some information on diagnosis of IRIS, symptoms and treatment of the patients included in the study.
3. The introduction and discussion are long, the authors need to rewrite both the sections omitting the sentences that are not relevant to current findings. In methods section HLA and KIR typing can be elaborated.
4. The study offers interesting insights into the association of KIR2DL3 with protection against TB onset. HLA-B*41, KIR2DS2, and CD8 count ≤ 500 cells/mm3 were associated with increased risk for IRIS onset among the TB-HIV co-infected patients. However, KIRs have ligands to HLA-C, the authors can shed some light into association of HLA C-KIR ligands and combinations.
5. What is the percentage of latent TB in HIV patients and healthy controls included into the study?
6. Were there any other metabolic, hormone, or haematological markers assessed for patients who developed IRIS on follow-up? Did any of the HIV patients enrolled develop IRIS on follow-up?
7. The authors need to carefully edit the manuscript to avoid repetitive sentences.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.
Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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