Author’s response to reviews

Title: KIR3DS1/L1 and HLA-Bw4-80I are associated with HIV disease progression among HIV typical progressors and long-term nonprogressors

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Author’s response to reviews: see over
Dear editor:

We greatly appreciate the reviewer’s efforts and helpful review of our manuscript (MS: 53844497796662493), “KIR3DS1/L1 and HLA-Bw4-80I are associated with affect HIV disease progression among HIV typical progressors and long-term nonprogressors”. We have revised the manuscript according to the reviewer’s comments. The changes in the manuscript have been highlighted with yellow color. Please find our point-by-point responses listed below. We thank you for your consideration of our revised manuscript.

Reviewer (Dr. Nicole Bernard)’s comments and our responses (underlined):

Overall the authors have responded appropriately to the reviewer critiques. However, some of the changes made need to be revised to improve English expression.

Discretionary Revisions

Suggestions for changes to be made can be found below.

Page 3 Methods: In this study, we studied KIR genotypes... Change to: Here, we studied...

Page 12, line 4... the frequency of individuals with the KIR3DL1 gene was no difference... change to: not different

Page 16 last par line 3... The following study was based on their genotypes, which were assigned into three groups-the “3DS1+80I+ ” group, the “3DS1+80I-” group and the “3DS1-80I+ ” group, to compared their CD4+ T cell counts and HIV viral loads between different groups. Change to: The next analyses compared CD4+ T cell counts and HIV viral loads between different three groups classified as 3DS1+80I+. 3DS1+80I- and the 3DS1-80I+.

Page 17 1st paragraph... Altogether, these results demonstrate that the KIR3DS1 and HLA-Bw4-80I genes provide an association with slow HIV disease progression and the combination of the two genes could be associated with higher CD4+ T cell counts. Change to Altogether, these results demonstrate that the KIR3DS1 and HLA-Bw4-80I combined genotype is associated with slow HIV disease progression and higher CD4+ T cell counts.

Page 17 2nd par... The results showed that KIR3DS1/L1 with HLA-Bw4-80T wasn’t different between groups based on CD4+ T cell counts, HIV viral load or disease progression. Change to: There were no between group differences in the frequency of the KIR3DS1/L1 with HLA-Bw4-80T combined genotype for comparisons based on CD4+ T cell counts, HIV viral load or disease progression.

Page 21/22 ...HLA-B*57, which had be reported that was highly associated with restriction of virus replication in a subgroup of HIV-infected long term nonprogressors [14]. However, we did not find any subject with HLA-B*57 in our study. Our data suggest that KIR3DS1 and HLA-Bw4-80I are associated with HIV disease without the influence of HLA-B*57 in our study. Change to: HLA-B*57 is associated with slow disease progression and viral load control (14). We did not find any subjects with this allele in our study population. Therefore, the association of KIR3DS1 and HLA-Bw4-80I with HIV disease course was not due to the influence
HLA-B*57 may have on disease course in our study.

Page 23 ... In future studies, more subjects should be used so that the statistical analysis will be more robust. It should be pointed out that multiple analyses have not been conducted in this report and this is a limitation of our study. Change to: It should be pointed out that one of the limitations of the results presented in this study is that although multiple analyses were conducted none were subjected to a Bonferroni correction.

References to the “Additional Table” should be to “Supplementary Table 1”

Page 29 legend for Figure 1. The frequencies of individuals with positive gene among different groups were compared in this figure. Change to: Shown, are results for the comparisons of the frequency of individuals in various study groups carrying a particular gene.

Page 30 legend for Figure 2. Real-time PCR analysis of KIR transcript in individuals, the relative expression of KIR3DS1 and KIR3DL1 mRNA is normalized to GAPDH mRNA in total RNA preparations. Change to: Shown are KIR transcript levels reflecting the relative expression of KIR3DS1 and KIR3DL1 mRNA normalized to GAPDH mRNA in total RNA preparations.

Response: We thank the reviewer for the wonderful suggestion and have made the changes according to the reviewer’s advice in the revised manuscript.