Reviewer's report

Title: In vitro characterization of novel and functional regulatory SNPs in the promoter region of IL2 and IL2R alpha in a Gabonese population

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Reviewer: Kumarasamy Thangaraj

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Authors have investigated regulatory polymorphisms in the immune gene IL2 and its receptor IL2R alpha in Gabonese individuals, who have been exposed to plentiful parasitic infections. In addition to two reported variants, they have identified two novel variants, -83/-84 CT deletions (ss410961576) in IL2 and -409C/T (ss410961577) in IL2R alpha. They further validated all promoter variants by transient transfection assays and found a significantly elevated expression of the reporter gene compared to the major allele.

This manuscript is well written and is important in the field of infectious disease. I have only a few minor comments:

1. Materials and Methods: why only male samples have been included in the study? Is it because of the availability of samples or any other reason? Mention about would be useful to the readers.
2. Table 1 and 2: It would be also interesting to see the allele frequency of other HapMap samples (CEU, CHB), if available.

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.