Reviewer's report

Title: Association of polymorphism rs1053005 in STAT3 with chronic hepatitis B virus infection in Han Chinese population

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Reviewer: Ju-tao Guo

Reviewer's report:
The primary determinants of clinical course and outcomes of HBV infection are the nature and strength of host antiviral immune responses. STAT3 is the important signal transducer of inflammatory cytokines and has been demonstrated to play important roles in the pathogenesis of many viruses, including HBV. This study investigated the association of rs1053005 and haplotype rs1053004-rs1053005 polymorphisms with HBV infection in Han Chinese population. An important finding of this study is that no significant difference in the frequency of specific allele or haplotype polymorphisms can be detected between chronic HBV carriers and individuals who resolve HBV infection. However, significantly increased frequency of rs1053004 allele C and genotype CC as well as reduced frequency of rs1053004-rs1053005 haplotype T-G in chronic HBV carriers with various clinical diseases, in comparison with healthy control subjects, were observed. Due to its low frequency in the study cohort, the biological significance of the reduced rs1053004-rs1053005 haplotype T-G frequency in HCC patients should be further investigated in future. In spite of the lack of mechanistic explanation, this study provides genetic evidence supporting a role of STAT3-mediated signal transduction in HBV pathogenesis. The authors have sufficiently addressed the concerns in my comments on the previous version.

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

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If not, please explain in your comments to the authors.
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