Reviewer's report

Title: Polymorphisms of interleukin-21 and interleukin-21-receptor genes confer risk for autoimmune thyroid diseases

Version: 3 Date: 8 March 2013

Reviewer: Matt Simmonds

Reviewer's report:

Comments to Authors

I thank the authors for addressing my comments. I would like to obtain clarity on the following points to ensure that the manuscript is able to be fully informative and transparent to any potential readers

Major Revisions

Response 8, Can the authors please add the justification of why they only screened 2 out of 13 Tag SNPs in the IL-21R gene into the main text of the manuscript.

Response 9, The authors stated that the Hardy Weinberg Equilibrium (HWE) for GD and HT patients were different from the control group and that unfortunately the HWE values for HT and GD were more than 0.05. Can I confirm that your GD and HT samples were not in HWE? This is a really important point when interpreting your data and as such can the authors please add comment on this in their manuscript and create a supplementary table with the HWE scores for your GD, HT and Controls for each SNP.

Response 13, The authors created a power calculation based on a variant with a minor allele frequency (MAF) of 0.20. Can the authors justify why this MAF was used? Was it the average MAF of all your SNPs?

Minor Revisions

Abstract results- For consistency across the abstract can the authors state if the GD IL-21 SNP rs2221903 also showed a genotype effect. Also for the association of HT with IL-21 rs2221903 can you add ORs and 95% CI as you have for the GD result.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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

Declaration of competing interests:
I declare that I have no competing interests