Reviewer’s report

Title: The association of TCF7L2 gene and diabetes

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Reviewer: Alan Shuldiner

Reviewer’s report:

In this manuscript, Qu and Polychronakos examined variants in the TCF7L2 gene and type 1 diabetes. Although this gene is a well replicated one for type 2 diabetes, they find no evidence of association of variants in this gene with type 1 diabetes. This negative study, performed in a reasonable number of Caucasian subjects, was performed well. It provides an important piece to the TCF7L2 story for the most part dismissing its role in Europid Caucasian type 1 diabetes. The study goes on to perform a meta analysis of all studies published to date showing very strong association of the TCF7L2 variant with type 2 diabetes including in subjects of similar ethnic background to those that were in this study of type 1 diabetes.

This reviewer has no major criticisms. The meta analysis for type 2 diabetes is probably not necessary. The main point that can be described simply in the manuscript is that other studies of TCF7L2 in similar ethnic backgrounds to that studied in this manuscript were strongly associated with type 2 diabetes. At the very least, the author should acknowledge publication bias of positive studies over negative studies that could inflate the effect size in the meta analysis.

What next?: Accept after minor essential revisions

Level of interest: An article whose findings are important to those with closely related research interests

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' below.