Reviewer's report

Title: Plasminogen Activator Inhibitor-1 4G/5G Polymorphism and Retinopathy Risk In Type 2 Diabetes: A Meta-analysis

Version: 1 Date: 20 July 2012

Reviewer: Alisa Manning

Reviewer's report:

The authors perform a meta-analysis of the association between the PAI-1 4G/5G polymorphism and diabetic retinopathy (DR) utilizing data from 9 case-control studies of 1217 cases and 1459 controls. Of the 41 studies found in a literature search, only 9 were appropriate case-control studies with sufficient information on the locus to be included in the meta-analysis.

The question posed by the authors is well defined. The methods are appropriate and well described. Because the analysis was based on published data, sufficient details have been provided to replicate the work. The available data set is somewhat small for a genetic association meta-analysis, although this is addressed in the discussion section.

Minor Essential Revisions

(1) For the statistical analysis, multiple genetic models and subsets of the data were considered and a P value of 0.05 for the summarized estimate was used to evaluate significance. Although the statistical tests are not independent, the authors should control for multiple testing or discuss this as a major limitation of the analysis.

(2) In this analysis, only marginal significant associations have been found--there are no genome-wide significant findings. Some may argue that genome-wide significance is not needed because only one genetic polymorphism is being tested. Please add a discussion relating this genetic association with the particular effect size to other genetic findings for DR of similar effect size. This will allow the reader to put the PAI-1 4G/5G polymorphism in context.

(3) The manuscript should be reviewed and edited by an English speaking individual. There are a small number of grammatical errors throughout the manuscript.

(4) In Table 1, "Pima Indians" are described as being from the U.K. The population of the Pima people are located in the United States. Table 1 should be double-checked for accuracy.

(5) In Table 2, the number of individuals contributing to each test should be included.
Quality of written English: Needs some language corrections before being published

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

Declaration of competing interests:

I declare that I have no competing interests.