Reviewer’s report

Title: Association between polymorphisms in the adiponectin gene and cardiovascular disease: a meta-analysis

Version: 1 Date: 16 March 2012

Reviewer: Frédéric Fumeron

Reviewer’s report:

In this meta-analysis, the authors have examined the associations of 3 ADIPOQ SNPs with CVD and CHD. Their conclusions support the associations, but they also report a significant heterogeneity between studies and the need for more high quality studies.

The study has been well conducted and analyzed. The paper is well written.

Minor essential revision

1) The +45T>G (rs2241766) and +276G>T (rs1501299) SNPs are in high linkage disequilibrium. Therefore, it would be interesting to assess whether their effects are independent (or not) by haplotypic analyses or whatever. Could it be possible to examine this point in the studies retrieved for this meta-analysis, or to test this by the meta-analysis per se?

2) The authors speculate on the mechanisms of these associations by mentioning the effects of these SNPs on adiponectin levels. Nevertheless, these particular SNPs are far from being the most influent on adiponectin levels, and their association is weak and/or controversial. This should be discussed.

3) It is claimed that the associations are significant but weak. Nevertheless, the magnitude of these associations is in the range of all positive associations found with SNPs in multifactorial polygenic disorders, even with the “top ten” SNPs from GWAS. This should be indicated.

4) In discussion, most of the numeric values from other published data should be omitted, because it makes the reading uneasy. Usually, in a discussion, when associations are mentioned, it is obvious that they are significant.

5) Full reference 27 is lacking.

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