Reviewer's report

Title: The interactive role of diabetes mellitus type 2 and E-selectin S128R mutation on coronary heart
disease manifestation

Version: 1 Date: 28 February 2007
Reviewer: Maria Grazia Andreassi

Reviewer's report:

General

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be
reached)

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This study investigated the association of the possible interaction between E-selectin S128R and diabetes
mellitus type 2 on the occurrence of coronary artery disease (CAD) in 1112 patients with angiographically
documented severe stenosis, and 427 patients with angiographically-proven absence of CAD. The results
indicated that the risk of CAD in patients with DM2 increases significantly in the presence of the 128R
mutant allele of the E-selectin gene.

The study has some limitations that need to be addressed.

1) The paper is extremely unclear in terms of the multivariable analysis of data. My main comment,
therefore, is to reanalyze the data by using a multivariate logistic regression analysis in order to adjust for
potentially confounding variables.
2) CAD was defined as severe stenosis (at least 70%). If they set the threshold of coronary CAD at mild
stenosis was the obtained result identical?
3) The genetic architecture of atherosclerosis and/or diabetic macrovascular vascular complications is likely
to result from the contribution of many genes interacting with different environmental factors. An undoubted
limitation of our study is the lack of a more comprehensive genetic analysis of attractive candidate genes.
Recently developed assays capable of simultaneously genotyping multiple loci are in common use in
association studies. Therefore, screening for genotype combinations of candidate genes might offer a better
opportunity to identify diabetic patients at a high risk for macro- complications. Briefly, discuss this issue as
a potential study limitation

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major
compulsory revisions

Level of interest: An article of limited interest

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'