Reviewer's report

Title: Interaction of functional NPC1 gene Polymorphism with smoking on coronary heart disease

Version: 3 Date: 15 June 2010

Reviewer: Pawel Niemiec

Reviewer's report:

The quality of the paper is enhanced both in statistics, result presentation and in discussion. In consequence I propose to accept this paper for publication but after some corrections.

1). The quality of English is still unsatisfactory (e.g. see results section, NPC1 gene polymorphism and cigarette smoking subsection).

2). The Authors did not give a references to recommendations and standards used in the classification of CAD, MI or risk factors. The references 16 and 17 are inadequate.

3) There are the results of comparison of AG/AA, GG/AG and GG/AA in the table 3, but not AA/AG, AG/AA, AA/GG, and this is a fundamental difference > protective/predisposing effect (univariate ORs are: 1.08, p=0.47 for AA/AG, 1.46, p=0.65 for AG/GG, 1.57, p=0.023 for AA/GG).

I do not understand why the authors presented these results. This analysis does not take into account the presence of three genotypes in the population and the authors consequently eliminated from the analysis one genotype (e.g. in AA/AG comparison, the GG genotype is ignored).

4) Once again, I suggest to substitute the models of inheritance by concrete genotypes comparisons (e.g. GG vs AA+AG) in whole text. This will improve the readability of the Paper.

5) Results section, NPC1 gene polymorphism and cigarette smoking subsection.

a) convert “table 4” to “table 5” in the text

b) I’m not sure that the results of this subsection and subsequent conclusions (also title) are correct, because there is still no numerical data (N of smokers with concrete genotypes), but only ORs and P values in the table 5.