Reviewer's report

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

Version: 2 Date: 9 April 2010

Reviewer: Fakhredin Sayed Tabatabaei

Reviewer's report:

The manuscript regarding the interaction of NPC1 Polymorphism with smoking by Ma et al. is well-written and is based on appropriate data. However, there are some important information that has to be added into the manuscript.

Major Compulsory Revisions:

1. The title of the manuscript indicates the most important findings to be the interaction. However, in the result section only one simple paragraph, and in the tables no actual data is presented. This part should be expanded to include detailed information.

2. Table 2 in its current format is not informative. Instead of presenting odds ratio's in three different genetic models, the authors should present two by two comparison between the genotypes. Such comparisons should also be presented separately among smokers and non-smokers in a new table (or graph). If adjustment with co-variates make significant differences in the findings, both adjusted and unadjusted results should be presented here as well.

Minor Essential Revisions:

3. In Table 1, the association for age, LDL, and TC is not in the expected direction. The authors have to comment on that.

4. In the last paragraph of discussion, the authors claim that "...[the findings] suggest therapeutic strategies to promote plaque stability." Also in the abstract they claim "These findings may provide evident that in gene status NPC1 contributes to lipid accumulation in human macrophages." The authors may not claim any conclusion that is not directly supported by their own finding.

5. Not enough information regarding the SNP is provided. For example, it is not mentioned in which part of the gene the SNP is located.

6. The polymorphism, and the alleles, are named differently throughout the manuscript, such as "C vs G," "His vs Arg," "+A644G," and "+644A/G." It is advised to use unique terminology for naming the polymorphism and the alleles in all parts of the manuscript.

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.