Reviewer's report

**Title:** Effect Modification of Air pollution on Urinary 8-Hydroxy-2'-Deoxyguanosine by Genotypes -- an Application of the Multiple Testing Procedure to Identify Significant SNP Interactions

**Version:** 1  **Date:** 8 July 2010

**Reviewer:** Francesco Nordio

**Reviewer's report:**

**Major Compulsory Revisions**

**Methods**

Page 6. Study population. The Authors might want to better describe how the 320 study subjects were selected. The only inclusion criterion specified was that all the study subjects were healthy; did you consider any other inclusion criteria?

Page 10. Statistical analysis. Could you add some annotations to explain how the step-down max T method worked and why it was preferred over others?

**Minor Essential Revisions**

**Results**

Page 11. Linear models were adjusted for potential confounders that were selected a priori. Would it be possible to add a table, as supplementary material, showing the strength of the association between potential confounders and the outcome/exposure variables? If such associations were not found, you could presents results from models with less covariates and use the adjusted results, already presented, as sensitivity analysis. It is not clear how the effect of smoking was taken into account. Table 1 shows that current smokers are a small percentage, while former smokers represent the majority; in order to take into account the actual effect of smoking on the association at study it would be preferable to have information also on pack-years; are they available? It could be interesting, for example, to categorize pack-years using tertiles in order to investigate the potential changes of 8-OHdG, for each type of genotype, in relation to air pollution.

Page 12. You considered as statistically significant associations with a p-value < 0.1. Could you explain why you chose this cut-off and not the usual p <0.05?

**Level of interest:** An article of importance in its field

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** No, the manuscript does not need to be seen by a
statistician.

**Declaration of competing interests:**

I declare that I have no competing interests