Reviewer's report

Title: Gene Polymorphisms in Association with Emerging Cardiovascular Risk Markers in Adult Women

Version: 1 Date: 23 July 2009

Reviewer: Melanie Waldenberger

Reviewer's report:

Major Compulsory Revisions
1. As the authors mention, the investigated markers are correlated with each other and with other phenotypes such as high blood pressure. The authors should present the degree of correlation between the analysed markers. It might well happen that the weak association between CRP concentrations and rs1801133 is based on the correlation of CRP and homocysteine concentrations. It might be of interest to further investigate these relationships (e.g. by conditional analysis).

Minor Essential Revisions
1. The selection of covariates for the conducted analysis is hard to follow. The authors refer to a long list of potential a priori selected covariates and state that only significant associated covariates for a specific marker were retained in the adjusted models. It would be of interest to see the final adjusted models for each of the four markers.

2. It would be of interest to the reader to discuss the present results with regard to the results of the recently published meta-analysis of GWA data for some of the investigated markers.

3. In the background section, the authors state that the selected candidate genes confer excess risk of cardiovascular disease. Properly by mistake, they reference a recent manuscript by Cambien and Tiret. In this manuscript other genes than the ones investigated here are discussed in relation to cardiovascular disease.

4. The wording emerging biomarkers seems out of place for the well known and extensively studied markers CRP, fibrinogen, uric acid and homocysteine.

5. The authors should carefully read the manuscript with respect to typos (e.g. it should read genes on page 2, paragraph 2 (methods), line 3)

Level of interest: An article of limited interest

Quality of written English: Acceptable

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.