Reviewer's report

Title: TGFB1 genetic polymorphisms and coronary heart disease risk: a meta-analysis

Version: 1 Date: 30 September 2011

Reviewer: Anne Marie Minihane

Reviewer's report:

In the current meta-analysis the authors summarise the association between the common TGFB1 polymorphisms and risk of coronary heart disease (CHD). Although published meta-analysis between TGFB1 gene variants and risk of various cancers (in particular breast cancer), COPD and hypertension are available no such data is currently available for CHD. The article is in general well written with the selection criteria for study inclusion, the statistical analysis and results clearly described, and the discussion reflective of the results.

1. Although the introduction is comprehensive with a clear description of the cellular sources and the associations between TGFB1 gene variants and CHD outcomes which have already been published, the introduction could perhaps be improved by:

- A brief description of the physiological effects and molecular modes of action of TGFB1 within the vasculature
- The novelty of the analysis should be highlighted, i.e. no meta-analysis describing the association between TGFB1 variants and CHD outcomes currently exists

2. I think the answer to my question is likely to be, No (as this would require the raw data probably?), but is there any possibility that data analysis could be conducted looking at the combined impact of co-inheritance of 2/3 risk allele on CHD risk. I guess if any two of the SNPs are already in high LD this analysis is irrelevant?

Minor points

3. Line 4 of the introduction: ‘could be secreted by several cell types’. I am not sure what this means. Are you suggesting that the literature is inconsistent as what are the main cellular sources, or the fact that the cellular source is dependent on stage of development or disease progression

4. P5, L9: ‘and this LD covered the whole 5’...’ It may be better described as ‘this DNA region covered the whole 5’

5. P6, L3: perhaps the word ‘validated’ may be more appropriate in the phrase ‘used proper CHD diagnostic criteria’

6. Not clear as current written how criteria set 2 are different from criteria 4 in the ‘Selection criteria’ subsection
Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests