Reviewer's report

Title: Methionine synthase A2756G polymorphism may predict ulcerative colitis and methylenetetrahydrofolate reductase C677T pancolitis, in Central China

Version: 2 Date: 8 January 2008

Reviewer: Elias Zintzaras

Reviewer's report:

The authors did not reply to my comments. The methodology and analysis followed is not appropriate and the results might be peculiar. The authors are advised to consult an expert in genetic analysis.

Sample size calculation is wrong! In genetic association studies sample size is not determined as in case-control studies in clinical research. See papers by the following authors: Gordon, de Bakker, Jackson, or Skol.

For each polymorphism should calculate the unadjusted OR (95% CI) for susceptibility to UC, and extensive UC, for the allele contrast, the dominant and recessive models of the minor allele.

The OR adjusted by age, sex and clinical variables (which is mentioned in the Statistical analysis section) should be calculated for the same genetic models.

Correct the analysis for multiple comparisons.

Omit the stepwise procedure. Otherwise follow the methodology introduced by papers of PC Sham (London).

Present combined genotypes and test associations using unadjusted Ors.

Test for LD and provide Ds and p-values.

Estimate haplotype frequencies for cases and controls using an EM algorithm and estimate the respective SE or p-values for each haplotype association.

Test for HWE using an exact test.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article whose findings are important to those with closely related research interests

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'