Reviewer's report

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

Version: 1 Date: 28 October 2007

Reviewer: Michael Fenech

Reviewer's report:

General

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1. The authors have not provided a plausible reason why altered folate/methionine metabolism could be a cause of UC. A plausible hypothetical mechanism should be explained in the background or discussion.
2. The study size is too small to make definite conclusions. The title and the concluding sentence in the discussion should indicate that the study results are only preliminary.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

The explanation of results in the abstract is confusing because it is not clear whether the data relate to controls or cases.

Background. Explain the function of the transcobalamin gene product.

Results. What was the reproducibility of the genotyping assays.

Page 6 line 7 from bottom. “with a……………episode” does not make sense. Please correct this phrase.

Explain “pancolitis”.

Last sentence on page 7 is unclear and needs to be re-written.

Was the impact of MTHFR C677T mutation on extensive lesions greater in those with the MTR A2756G mutation?

Last sentence of discussion should be changed to indicate that these are only preliminary data and that a larger study is needed to verify the results.
Discretionary Revisions (which the author can choose to ignore)

**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:** 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