Reviewer's report

Title: Gene Expression Changes Associated with Barretts Esophagus and Barretts-Associated Adenocarcinoma Cell Lines After Acid or Bile Salt Exposure

Version: 1 Date: 9 February 2007
Reviewer: Gareth Jenkins

Reviewer's report:

General
The paper looks at the effect of acid and bile on proliferation in vitro and ex vivo through gene expression analysis and assessment of cell turnover. There are some interesting findings in this report and a wealth of gene expression data in the supplemental files. Whilst none of the gene expression findings suggested proliferation, this data may provide a valuable resource for researchers looking at the biology of Barrett's metaplasia and subsequent carcinogenesis.

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

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
1. Methods page 5. More details needed in the methods section. For example, the list of conjugated/unconjugated bile acids only contains conjugated ones (glyco, tauro). It is not clear why 2 different mixtures of conjugated bile acids were used. Were these types and concentrations used to reflect those seen in the refluxate in vivo?
2. Page 5, line 6. tauro-c-henodeoxycholic

Discretionary Revisions (which the author can choose to ignore)
1. Can the authors provide brief justifications for dosing schedules (concentrations of bile acids, time points)? One reason for a lack of expression changes here compared to other reports (e.g. via MapK), could involve differences in dosing schedules, time points etc compared to other reports.
2. The acid exposures were carried out for up to 60 minutes, followed by 4 hours recovery, whereas the bile exposures were carried out for 60 minutes followed by 24 hours recovery, why the difference?
3. The acid pulses here showed no effect on proliferation, which is in contrast to earlier work. This inconsistency is not discussed and perhaps should be.
4. Why were 3 measures of proliferation shown for acid, but only 1 for bile? Is the MTS and cell count data available for bile treated cells? If so, does it show the same thing as the thymidine data?

What next?: Accept after minor essential revisions

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

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