Reviewer’s report

Title: PRAF3 induces apoptosis and inhibits migration and invasion in human esophageal squamous cell carcinoma

Version: 3 Date: 16 February 2012

Reviewer: Ben J Colleypriest

Reviewer’s report:

Minor Essential Revisions
All have been revised appropriately

Major Compulsory Revisions

1 - The immunohistochemistry in figure 1 suggests that the expression of PRAF3 in normal squamous tissue is expressed as a decreasing gradient from the differentiating squames compared to the transit amplifying and stem cell compartment. PRAF3 has been shown to induce differentiation in certain cell lines and would provide an alternative explanation to the authors conclusion for the observation in figure 1 (1).

This has now been included in the discussion

2 - In subsequent cell line experiments neither cell line is characterised to their initial cell phenotype and differentiation status. Given that the majority of data relates to cell line experiments I think the cell lines need to be characterised at least prior to experimentation.

This has been revised by referencing the original article describing TE-1 cells and another using established Eca109

3 - How was the activity of ad-cmv-null virus tested? Given that a proportion of the results relate to cell death and migration it is important that the ad-cmv-null virus is validated.

This has been answered and revised in the text

4 - The limitation of applying functional data from cell lines to in vivo is not discussed. Are the results unique to cancer cell lines and what is the effect of PRAF3 overexpression on normal oesophageal cell? If PRAF3 is a lead molecule for the development of ESCC, as suggested by the authors, its role in normal oesophageal cells should be understood.

This has been included in the discussion

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