Reviewer's report

**Title:** Potential of HSP90 inhibitor 17-N-allylamino-17-demethoxygeldanamycin for treatment of oesophageal cancer in NQO1 positive cells

**Version:** 1  
**Date:** 3 January 2014

**Reviewer:** Jyoti Tope

**Reviewer's report:**

The present study undertakes an important aspect of cancer therapy that should be relevant in the efforts to improve efficacy of existing anti-cancer drugs. Having said that similar studies have already been performed on pancreatic cancer cell lines (D Siegel et al 2011). In that sense some of the work may be redundant.

The methodology described is appropriate and the study clearly establishes a correlation between NQO1 levels and sensitivity to 17AAG (by using MTT assays, proliferation assays and apoptotic assays).

Discretionary Revisions: The authors are suggested to consider a change of title to, ‘Use of NQO1 status as a selective biomarker for tumours with greater susceptibility/ sensitivity to 17AAG’ since the response of NQO1 positive cell lines to 17AAG seems to be the main focus in this paper. Also authors are suggested to include the need for further in vivo studies to be carried out to test the hepato-toxicity (or other toxicity parameters) of 17AAG in NQO1 positive models as the apprehensions to the use of 17AAG are not because of reduced potential but because of its toxicity. Thus although NQO1 status predicts sensitivity to the drug does it have any correlation with the toxicity? Authors can include comments about these using relevant references.

Low expression of NQO1 gene in WHCO1 and WHCO6 suggests possibility of variable expression of the gene in cancerous and normal tissues. Does this imply need to assay NQO1 enzyme activity in biopsies?

Minor Essential Revisions: Paper as sent for review does not include abbreviations.

Provide complete bibliographic details for Ref no. 1

Major Compulsory Revisions: None.

**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.