Reviewer's report

**Title:** Natural resistance to ascorbic acid induced oxidative stress is mainly mediated by catalase activity in human cancer cells and catalase-silencing sensitizes to oxidative stress

**Version:** 1  **Date:** 29 November 2011

**Reviewer:** Hiroomi Tamura

**Reviewer's report:**

The authors described the positive correlation between the resistance index to ascorbic acid and the activity of catalase in various human carcinoma cells. This is a carefully done and the findings are of considerable interest. However, it would be better if some extra data or description were added as listed below.

**Major comments**

1. Expression of vitamin C transporter (SVCT) gene in each cell line should be determined because the level of SVCT is thought to be another determinant for the intra-cellular vitamin C concentration within the cell.

2. The reason why each cell expresses different catalase activity should be described, including a possible regulation of catalase gene expression within the cells.

**Minor comments**

1. Arrows in Fig. 3 should be omitted.

2. Presentation of p values is not correct in Fig. 4. It should be presented by “less than(<)” not “equal(=)” as in the legend.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.