Reviewer’s report

Title: Gamma-tocotrienol treatment increased peroxiredoxin-4 expression in HepG2 liver cancer cell line

Version: 2 Date: 17 June 2014

Reviewer: Hiromi Sato

Reviewer’s report:

Major Compulsory Revisions

1. Authors stated in conclusion that Prxs4 might trigger or induce the suppression of proliferation HepG2 cells, while it was only shown to be decreased at mRNA expression level after GTT treatment in HepG2 cells in validation experiment. Why it hadn’t been shown as change of protein level? Authors also referred its half life in discussion. It was only factor which authors found to be changed significantly after GTT treatment by 2-DE followed MALDI-TOF/MS analysis. Therefore detection of protein level, unambiguous data like mRNA level as validation, should be added with quantitative and reproducible data.

2. In supplement, Table 2 should be revised. It cannot be accepted as scientific one. If data would be shown as a Table, it needed to be quantitative value.

Minor Essential Revisions

3. Prks seems to be involved with endoplasmic reticulum stress (ER stress) because it is localized there. Because ER stress is one of the trigger of apoptosis in cancer cells after anti-tumor agents, it seems better to add some reference in discussion.

Level of interest: An article of limited interest

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.