Reviewer’s report

Title: Effects of beta-sitosterol derived from Artemisia capillaris on the activated human hepatic stellate cells and dimethylnitrosamine-induced mouse liver fibrosis

Version: 2
Date: 1 August 2014

Reviewer: Jae-Young Um

Reviewer’s report:

Minor Essential Revisions

The manuscript entitled “Effects of beta-sitosterol derived from Artemisia capillaris on the activated human hepatic stellate cells and dimethylnitrosamine-induced mouse liver fibrosis” by Kim et al described that the anti-hepatofibrotic effect of beta-sitosterol using the activated hepatic stellate cellular model as well as hepatic fibrosis mouse model. The hypothesis and data are novel and relevant, but there should be the minor revision.

Abstract

The sentence ‘-smooth muscle actin’ in the abstract section must be corrected into ‘a-smooth muscle actin’. And the other sentences that absent ‘a (alpha)’ must be checked throughout the manuscript.

Methods

The authors determined the anti-fibrotic effects of beta-sitosterol, but the investigation is only focused on the collagen-1 and a-SMA expressions levels. Authors should explain the significance of the targets in the hepatic fibrosis.

Results

The oral administration of beta-sitosterol at 40 mg/kg seems to increased collagen-1 and a-SMA expression. Authors should explain the results.

The beta-sitosterol treatment seems to affects the collagen-1 and a-SMA expressions in vitro. However, differences between the mRNA and protein expression levels in the cells affected by each dose of beta-sitosterol treatment are observed. Authors should explain the results.

Figures

The authors use gene name mixed with protein name. For example, ‘Relative MMP-1 mRNA level’ in the Figure 2A must be used as ‘Relative MMP1 mRNA level’. Please clear up the term.

Figure legends

Please provide more information in the figure legends. Especially, Figure 2,3,
and 5.

**Level of interest:** An article of outstanding merit and interest in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests.