**Reviewer’s report**

**Title:** Extract of Stellera chamaejasme (ESC) inhibits growth and metastasis of human hepatocellular carcinoma via regulating microRNA expression

**Version:** 0  **Date:** 28 Oct 2017

**Reviewer:** Ariyapong Wongnoppavich

**Reviewer's report:**

1. The authors lack an explanation of statistical analysis in this study. Figure 1A-B do not show the p-value, and fig. 1C lacks standard deviation of IC50 values.

2. The method section lacks important details of many experiments as follows.

   2.1 Cell treatment for Immunofluorescence analysis is not described in figure legends as it is written in Line 130. How long were the cells treated with the ESC? And what is the dose of ESC? See Figure 2A

   2.2 How did the author measure the metastasis tumors and the intrahepatic metastasis rate?

   2.3 In miRNA expression profile analysis, the author did not provide experiment details of cell treatment such as time duration, concentration of cells.

   2.4 Statistical measurement used in all experiments in this study

3. The result in Figure 2 B shows that the lowest dose (0.05 ug/mL) of ESC inhibited the cell migration more effective than the highest dose (0.1 ug/mL), yet it clearly contradicts with the result shown in Figure 2C as 0.1 ug/mL of ESC is more effective to increase the expression of E-cadherin and decrease that of vimentin. Explanation of these observation is needed.

4. Migration cells should be counted in all fields or five random fields in the same area for unbiased measurement.

5. Two cell lines HepG2 and MHCC97H were used in this study, yet the author did not justify their difference and chose detecting the immunofluorescence of vimentin in only HepG2 whereas E-cadherin in MHCC97H.

6. The author did not discuss at all about the plant exact and its bioactive compounds which has been previously identified. The relevance studies should be cited and explain in discussion.

7. More information in the legend of Figure 5 is needed.

8. In the abstract, changes in gene expression should be clearly stated and "decrease" or "increase".
9. Are there any pathological lesion in other organs of mice treated with ESC? It would be beneficial to show whether the extract has no toxicity to the animals.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Unable to assess

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

No

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

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