Reviewer’s report

Title: 2-Ethoxystypandrone, A Novel Small-Molecule STAT3 Signaling Inhibitor from Polygonum Cuspidatum, Inhibits Cell Growth and Induces Apoptosis of HCC cells and HCC Cancer Stem Cells

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Reviewer: Yuuki Kurebayashi

Reviewer's report:

The authors reports on a novel STAT3 inhibitor, 2-ethoxystypandrone, extracted from roots of P. cuspidatum. 2-Ethoxystypandrone blocked STAT3 signaling activation and inhibited cell growth of hepatocellular carcinoma cells, tumorspheres formation. These results suggest that 2-ethoxystypandrone could be a lead compound for novel STAT3 inhibitor for HCC cells.

There are only a few minor comments for this manuscript.

1. In this manuscript, the word "2-ethoxystypandronec" and "2-Ethoxystypandron" are used in several times respectively. The manuscript should be checked.

2. Page 9, line 16, Does the word "a-MEM" mean "α-MEM" ? The word should be checked.

3. In the discussion part, the authors described that 2-ethoxystypandrone showed 2-fold increased potency compared with 2-methoxystypandrone. Could the authors provide more commentary for comparison of 2 methoxystypandrone and 2 ethoxystypandrone in inhibition of cell growth and apoptosis induction.

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

Yes

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

Yes

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

Yes
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.

Not relevant to this manuscript

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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