Reviewer’s report

Title: Oryeongsan inhibits LPS-induced production of inflammatory mediators via blockade of the NF-kappaB, MAPK pathways and leads to HO-1 induction in macrophage cells

Version: 2
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Reviewer: Bo Liu

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The manuscript entitled “Oryeongsan inhibits LPS-induced production of inflammatory mediators via blockade of the NF-kappaB, MAPK pathways and leads to HO-1 induction in macrophage cells” has discussed anti-inflammatory effects and inhibitory mechanism of Oryeongsan (OR) in LPS-stimulated macrophages, thereby showing potential value of OR as an inflammatory therapeutic agent. Although the topic is novel and interesting, there are some points the author need to revise before it can be accepted. Therefore, I would like to suggest Major Compulsory Revisions to this manuscript.

The points are as follow:

1. The English writing in the paper is poor and the paper needs to be re-written by a native English speaker. Please double check grammatical errors and the convoluted sentences, as well as reproducing the data from the references clearly.

2. The Abstract needs to be re-written, especially in the part of Methods. The author should emphasize what kind of methods they have taken advantage of to test pharmacological and biological effects of OR in RAW 264.7 macrophage cells. The content in Background and Conclusions should be added to illustrate the purpose more detailed.

3. The part of Background did not provide enough information about OR, inflammation, and related components including LPS, NF-kappaB, MAPK and HO-1 in RAW 263.7 marcopahge cells. The author should look for some updated references in this part to illustrate their points specifically.

4. In the part of Result, there are some misleading points. Firstly, I am not sure why the author chose a concentration of 1000 µg/mL as a standard to test whether the drug is toxic to cells. Secondly, although over-production of NO is associated with various inflammatory diseases, why did the author think that the suppression of NO by LPS stimulation can demonstrate that OR has inhibitory effects on the production of pro-inflammatory mediators. What is more, why did the author pick NF-kappaB and MAPK as representatives in this work?

5. The part of Discussion seems to be a conclusion of the Result, but lack basic discussion about the future use of OR or how this work can influence the future study on the similar part. Therefore, the author should more content in Discussion to discuss about the meaning of their work.
6. I personally suggest that the author should rearrange the content of picture, since current forms contain no explaining words and are hard to understand.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

**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.