Author's response to reviews

Title: A water extract of Samchulkunbi-tang attenuates airway inflammation by inhibiting iNOS and MMP-9 activities in an ovalbumin-induced murine asthma model

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BMC Complementary and Alternative Medicine (Section: Basic research)

Dear Editors

Thank you very much for your editorial decision letter, which also included the reviews of our manuscript by referees. We have made the changes as suggested by the reviewers. The changes are marked in blue in the revised text. We have made during the revision in a point-by-point response to each of the comments.

We hope the revisions made the responses provided are satisfactory, and our manuscript is now acceptable for publication in the BMC Complementary and Alternative Medicine.

Please, let us know if further revisions are needed.

Once again, thank you for all your help. We look forward to hearing from you.

Sincerely yours,

cozy37@gmail.com
Reviewer's report:

The paper by Lee et al is focused on the protective mechanisms of Samchulkunbi-tang water extract (SCTE) in a model of ovalbumin (OVA)-induced allergic asthma. Although descriptive, the study is well designed and executed. Importantly, the obtained results are novel and the paper is well written. I have only one minor comment regarding this excellent work: a reference to the “exterior syndrome” in the Abstract is not clear. I suggest removing this part of the Abstract. → We appreciate your comment. As commented by reviewer, we edited this statement in Abstract.

Reviewer's report:

The authors of this manuscript demonstrated that Samchulkunbi-tang water extract (SCTE) reduced the number of inflammatory cells, cytokines, and chemokines in bronchoalveolar lavage fluids and iNOS expression and MMP-9 activity in mouse lung tissue. And SCTE substantially inhibited OVA-induced inflammatory cell infiltration in lung tissue and goblet cell hyperplasia in the airway. This is a timely and significant study. I have some questions and comments on this manuscript as follows:

1. Some of yours results (cytokines levels, pro-inflammatory protein expression) suggest a possible dose-dependent effect of SCTE. Is there any reference of a dose-dependent effect of SCTE in vivo?

→ We appreciate your comment. In preliminary studies, we used the dose levels of 300 mg/kg and 600 mg/kg as effective doses. The procedure of preliminary studies is consistent with those of this study. In BALF, inflammatory cell counts were decreased in 300 mg/kg and 600 mg/kg of SCTE treated mice compared with OVA-challenged mice. However, 300 mg/kg treated mice more decreased inflammatory cell counts than 600 mg/kg treated mice.
Therefore, based on the preliminary studies, we used 200 mg/kg and 400 mg/kg of SCTE as oral doses in this study.

2. Histology: Scoring of PAS and inflammation: I appreciate the adding of the graphs for inflammation and mucus production. The way the inflammation and mucus production are scored should be added to material and method?
- We appreciate your comment. This statement was added in the manuscript.

3. Please include limits of detection for IL-4 and IL-5 ELISA assays.
- We appreciate your comment. The ranges of detection for IL-4 and IL-5 are 0 to 1000 pg/mL and 0 to 500 pg/mL, respectively. This statement is described in manuscript.

4. The authors need to say something about SCTE relative to the positive control.
- We appreciate your comment. We inserted following sentences:
  Administration of montelukast was induced anti-inflammatory effects such as the reduction in the numbers of eosinophils and macrophage into the BALF, inflammatory cells infiltration in the lung tissue and levels of cytokines and IgE in this study.

5. Added the scale bar in all photography pictures.
- We appreciate your comment. We inserted the scale bar in the Fig. 5.