

Subject: *Bifidobacterium infantis* CGMCC313-2's Protective Effect on Ovalbumin-induced Airway Asthma and β -lactoglobulin-induced Intestinal Food Allergy Mouse Models

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Manuscript Type: Original Article

Dear Editors and Reviewers,

Many thanks for kind comments on our submission, and your work would be so important for us because these comments could make our article published with higher quality. And point-to-point responses are shown as follows, please kindly check it. Looking forward to your valuable comments, and we would like to do corresponding revision as you suggest.

Comment 1 (Reviewer's code: 00503255): 1. In histological analysis of lung and intestine, did the authors analyze the grade of eosinophil infiltration? Did the authors count eosinophil in BALFs?

Reply 1: Because the fixed tissues were not good enough to distinguish eosinophilic granulocyte and neutrophil, the grade of eosinophil infiltration was not analyzed. But all the leukocytes in the BALF of OVA- sensitized/challenged mice were counted and the specific numbers were exhibited in Figure 5.

Comment 2 (Reviewer's code: 00503255): 2. The serum levels of OVA-IgG1 in the pre-treatment group was significantly decreased compared with prevention group, while the serum levels of OVA-IgE in the prevention group was significantly decreased compared with pre-treatment group. Is there any reason regarding this results?

Reply 2: The administration time of *B. infantis* CGMCC313-2 between prevention group and pre-treatment group was different, and the allergic reaction time of IgG1 and IgE might different in the OVA-mouse models. We also suspected that the number of mice which used in the groups might contribute the results. Generally, the serum levels of OVA-IgG1 and OVA-IgE in the pre-treatment group and prevention group were significantly decreased compared with OVA

sensitization/challenge group, and *B. infantis* CGMCC313-2 exhibited protective effect of on OVA-induced asthma.

Comment 3 (Reviewer's code: 00503255): 3. The style of references the authors used is different from that of this journal. Please read the author guideline of this journal again and revised references. : Journal title should be written in its abbreviation form. : Please provide PMID and DOI

Reply 3: The numbers of PMID and DOI were provided and highlighted in the reference, and journal titles were also replaced by their abbreviation forms.

Comment 4 (Reviewer's code: 00646241): In the title, it is not mentioned that the experiments were done in an adult mouse model.

Reply 4: The title of the manuscript has been revised, and the information of adult mouse model was exhibited.

Comment 5 (Reviewer's code: 00646241): The type of allergy models used should be explained a bit more in the introduction.

Reply 5: The background information of OVA-induced asthma mouse model and BLG-induced food allergy mouse model was added in the introduction part of manuscript.

Comment 6 (Reviewer's code: 00646241): The possible mechanisms of the observed effects should be discussed.

Reply 6: The metabolites of *B. infantis* CGMCC313-2 which affect the inflammatory responses were explored in the part of discussion, and we also illustrated the possible role of the *B. infantis* in Treg responses. And please tell us if there are any other results needed to be specified.

Comment 7 (Reviewer's code: 02840182): The title would be better "Bifidobacterium infantis CGMCC313-2's protective effect...".

Reply 7: Thanks for your kind remind, and the title of the manuscript has been re-edited.

Besides these revisions, we also made corrections to the manuscripts according to the suggestions given by the editor. The revisions are specified in the following part.

1. The contents of the title page, including the Manuscript Type, Title, Running Title, Authors, Statements and Author contributions, were supplied and arranged as indicated.
2. The parts of Scientific Research Process, Core Tips and Comments were conclude and added to the manuscript.
3. The format of REFERENCE was re-edited as instructed.
4. The figures were split into several pictures which can be moved and edited conveniently.

We appreciate for Editor and Reviewers' warm work earnestly, and hope that the correction will meet with approval.

Once again, thank you very much for your comments and suggestions.

Best wishes,

Yuejie Zheng