PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

Manuscript NO: 78506

Title: Differential analysis of intestinal microbiota and metabolites in mice with dextran sulfate sodium-induced colitis

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer’s code: 06131948

Position: Peer Reviewer

Academic degree: PhD

Professional title: Doctor, Teacher

Reviewer’s Country/Territory: Russia

Author’s Country/Territory: China

Manuscript submission date: 2022-07-12

Reviewer chosen by: AI Technique

Reviewer accepted review: 2022-07-12 17:46

Reviewer performed review: 2022-07-18 04:35

Review time: 5 Days and 10 Hours

<table>
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<tr>
<th>Scientific quality</th>
<th>[ ] Grade A: Excellent</th>
<th>[ ] Grade B: Very good</th>
<th>[Y] Grade C: Good</th>
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<tr>
<td></td>
<td>[ ] Grade D: Fair</td>
<td>[ ] Grade E: Do not publish</td>
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<tr>
<th>Language quality</th>
<th>[Y] Grade A: Priority publishing</th>
<th>[ ] Grade B: Minor language polishing</th>
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<td>[ ] Grade C: A great deal of language polishing</td>
<td>[ ] Grade D: Rejection</td>
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<tr>
<th>Conclusion</th>
<th>[ ] Accept (High priority)</th>
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<td></td>
<td>[Y] Minor revision</td>
<td>[ ] Major revision</td>
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<tr>
<th>Re-review</th>
<th>[Y] Yes</th>
<th>[ ] No</th>
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**Peer-reviewer statements**

<table>
<thead>
<tr>
<th>Peer-Review:</th>
<th>Anonymous</th>
<th>Onymous</th>
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<tbody>
<tr>
<td>Conflicts-of-Interest:</td>
<td>Yes</td>
<td>No</td>
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**SPECIFIC COMMENTS TO AUTHORS**

The article is of clinical interest. The research methods are up-to-date and consistent with the purpose of the article. The article is illustrated with a sufficient number of figures. The list of references contains up-to-date references. Comments:

1. It is recommended to add a figure with the study design.
2. Was the effect of the antibiotics used evaluated on the intestinal epithelium? Could these antibiotics directly affect the expression of some key proteins involved in colitis? For example, treatment with metronidazole may affect goblet cell function and expression of some key proteins.
3. Was there antibiotic-associated diarrhea in mice in the pseudo-aseptic group? Could it have affected the acceleration of DSS elimination and the severity of colitis?
Name of journal: World Journal of Gastroenterology

Manuscript NO: 78506

Title: Differential analysis of intestinal microbiota and metabolites in mice with dextran sulfate sodium-induced colitis

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer’s code: 05225141

Position: Peer Reviewer

Academic degree: DVM, PhD

Professional title: Doctor

Reviewer’s Country/Territory: United States

Author’s Country/Territory: China

Manuscript submission date: 2022-07-12

Reviewer chosen by: Dong-Mei Wang

Reviewer accepted review: 2022-08-30 13:03

Reviewer performed review: 2022-09-07 16:58

Review time: 8 Days and 3 Hours

Scientific quality

[ ] Grade A: Excellent [ Y ] Grade B: Very good [ ] Grade C: Good
[ ] Grade D: Fair [ ] Grade E: Do not publish

Language quality

[ ] Grade A: Priority publishing [ Y ] Grade B: Minor language polishing
[ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection

Conclusion

[ ] Accept (High priority) [ Y ] Accept (General priority)
[ ] Minor revision [ ] Major revision [ ] Rejection

Re-review

[ ] Yes [ Y ] No
SPECIFIC COMMENTS TO AUTHORS
In this study, the authors investigated the changes in intestinal microbiota and metabolites in mice with dextran sulfate sodium-induced colitis and the correlation between gut microbiota and metabolites. Overall, the study was well-designed and performed. Some minors are suggested. In the methods, the tools or website for ‘Comparison of biological information for differential microbiota’ should be listed. In the Discussion, some contexts such as ‘There are 10 to 100 trillion microorganisms in the human gastrointestinal tract, and in the past few decades, the impact of the gut microbiota on human health has received widespread interest from science and the general public.’ and ‘Different antibiotics selectively deplete different members of the microbiota…’ In contrast, more information should be discussed about the new bacterial and metabolite function in UC or colitis. For MUC2, list the abbreviation at the first time. Some letters or words in the figures are too small, such as Figure 4B. Figures could be separated at different slides/pages when providing the original images. applied to eatablish > establish
PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

Manuscript NO: 78506

Title: Differential analysis of intestinal microbiota and metabolites in mice with dextran sulfate sodium-induced colitis

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer’s code: 05040484

Position: Editorial Board

Academic degree: MD, PhD

Professional title: Assistant Professor, Doctor, Professor, Research Scientist

Reviewer’s Country/Territory: Russia

Author’s Country/Territory: China

Manuscript submission date: 2022-07-12

Reviewer chosen by: Dong-Mei Wang

Reviewer accepted review: 2022-08-30 07:00

Reviewer performed review: 2022-09-09 20:05

Review time: 10 Days and 13 Hours

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| Re-review         | [ Y] Yes | [ ] No |
SPECIFIC COMMENTS TO AUTHORS

This is an interesting study, but I have a few comments: 1) I did not find any mention of the Phachyocytes phylum (listed in the Results chapter) in the publications; 2) Proteus is not a phylum, but a genus 3) the design of the study is too complex, the flowchart is not presented; 4) the number of examined animals in subgroups is too small to draw conclusions; 5) the aim of the study and the choice of experimental interventions are not clear: the authors claim they want to study ulcerative colitis, but describe the features of some colitis experimental models, but not in ulcerative colitis itself
### RE-REVIEW REPORT OF REVISED MANUSCRIPT

**Name of journal:** World Journal of Gastroenterology  
**Manuscript NO:** 78506  
**Title:** Differential analysis of intestinal microbiota and metabolites in mice with dextran sulfate sodium-induced colitis  
**Provenance and peer review:** Unsolicited Manuscript; Externally peer reviewed  
**Peer-review model:** Single blind  
**Reviewer’s code:** 05040484  
**Position:** Editorial Board  
**Academic degree:** MD, PhD  
**Professional title:** Assistant Professor, Doctor, Professor, Research Scientist  
**Reviewer’s Country/Territory:** Russia  
**Author’s Country/Territory:** China  
**Manuscript submission date:** 2022-07-12  
**Reviewer chosen by:** Han Zhang  
**Reviewer accepted review:** 2022-10-10 04:27  
**Reviewer performed review:** 2022-10-10 04:32  
**Review time:** 1 Hour

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<td>Peer-reviewer</td>
<td>Peer-Review: [ Y ] Anonymous</td>
<td>[ ] Onymous</td>
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SPECIFIC COMMENTS TO AUTHORS

No comments.
RE-REVIEW REPORT OF REVISED MANUSCRIPT

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Reviewer’s code: 06131948

Position: Peer Reviewer

Academic degree: PhD

Professional title: Doctor, Teacher

Reviewer’s Country/Territory: Russia

Author’s Country/Territory: China

Manuscript submission date: 2022-07-12

Reviewer chosen by: Han Zhang

Reviewer accepted review: 2022-10-10 06:44

Reviewer performed review: 2022-10-10 13:08

Review time: 6 Hours

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<td>Major revision</td>
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Peer-reviewer

Peer-Review: Anonymous
SPECIFIC COMMENTS TO AUTHORS
The authors made changes to the article that improved its quality.