

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

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

**Peer-reviewer
statements**

Peer-Review: [☒] Anonymous [☐] Onymous

Conflicts-of-Interest: [☐] Yes [☒] No

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?

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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	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Peer-reviewer statements	Peer-Review: [<input checked="" type="radio"/>] Anonymous [<input type="radio"/>] Onymous Conflicts-of-Interest: [<input type="radio"/>] Yes [<input checked="" type="radio"/>] No
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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

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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

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input checked="" type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

**Peer-reviewer
statements**Peer-Review: [☒] Anonymous [☐] OnymousConflicts-of-Interest: [☐] 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

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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

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Peer-reviewer	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous



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statements

Conflicts-of-Interest: [] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

No comments.

RE-REVIEW REPORT OF REVISED MANUSCRIPT

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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

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input checked="" type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Peer-reviewer	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous



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statements

Conflicts-of-Interest: [] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

The authors made changes to the article that improved its quality.