

## PEER-REVIEW REPORT

**Name of journal:** *World Journal of Gastroenterology*

**Manuscript NO:** 80210

**Title:** Gaseous metabolites as therapeutic targets in ulcerative colitis

**Provenance and peer review:** Invited Manuscript; Externally peer reviewed

**Peer-review model:** Single blind

**Reviewer's code:** 04010086

**Position:** Peer Reviewer

**Academic degree:** MD

**Professional title:** Doctor

**Reviewer's Country/Territory:** China

**Author's Country/Territory:** Australia

**Manuscript submission date:** 2022-09-20

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2022-09-24 08:41

**Reviewer performed review:** 2022-10-04 10:12

**Review time:** 10 Days and 1 Hour

<b>Scientific quality</b>	<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 Grade E: Do not publish
<b>Language quality</b>	<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
<b>Conclusion</b>	<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
<b>Re-review</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Peer-reviewer</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous

statements

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

#### **SPECIFIC COMMENTS TO AUTHORS**

Thank you for the opportunity to review manuscript WJG- 80210 which is well-designed and well-written. This review summarizes the possible relationship between microbial production of gaseous metabolites and the development and progression of ulcerative colitis, with emphasis on the evidence of excessive exposure to H<sub>2</sub>S and NO as the etiology of ulcerative colitis. In addition, this study reviews studies related to dietary regimens aimed at reducing these gas metabolites as a treatment strategy for UC and summarizes the results of these studies. Even after thoroughly reviewing this article I was not able to find any major flaws. However some minor points could be rectified: 1. The relationship between gas metabolites and the pathogenesis of UC needs to be explored in more detail, and it is better to summarize the possible mechanisms in the form of pictures. 2. It is better to list the results of clinical studies on targeted reduction of gas metabolites through dietary regimen as a treatment strategy for UC in the form of tables, and put forward constructive suggestions for subsequent clinical studies combined with the existing research conclusions. After these minor modifications, I think the manuscript can be accepted for publication.

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**Peer-review model:** Single blind

**Reviewer's code:** 06404369

**Position:** Peer Reviewer

**Academic degree:** MD

**Professional title:** Doctor

**Reviewer's Country/Territory:** Turkey

**Author's Country/Territory:** Australia

**Manuscript submission date:** 2022-09-20

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2022-10-19 06:47

**Reviewer performed review:** 2022-10-19 08:01

**Review time:** 1 Hour

<b>Scientific quality</b>	<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
<b>Language quality</b>	<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
<b>Conclusion</b>	<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
<b>Re-review</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Peer-reviewer</b>	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**

Dear Author, Your paper "Gaseous metabolites as therapeutic targets in ulcerative colitis" interestingly reviews the dietary approaches in H<sub>2</sub>S and NO as causative agents in UC. However, there are some minor concerns with the paper as outlined below; - Throughout the manuscript there is lack of bibliographic references. - Core tip doesn't include in the Word document. - Under DIET AS PRIMARY STRATEGY FOR COLONIC H<sub>2</sub>S & NITRIC OXIDE MANIPULATION I would add some literature notes to better contextualize the impact of probiotics and prebiotics. Additionally, BIOMARKERS FOR ASSESSING RESPONSE OF DIETARY THERAPY other self-reported questionnaires (abdominal pain frequency with visual analog scale, food frequency questionnaire, Food-related quality of life (FRQoL), health-related quality of life (HRQoL)) could be mentioned under this topic to evaluate adherence/response of diet interventions. Otherwise, the review is interesting and well-written.

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**Provenance and peer review:** Invited Manuscript; Externally peer reviewed

**Peer-review model:** Single blind

**Reviewer's code:** 04025443

**Position:** Editorial Board

**Academic degree:** MD, PhD

**Professional title:** Doctor, Senior Researcher

**Reviewer's Country/Territory:** Russia

**Author's Country/Territory:** Australia

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**Reviewer chosen by:** AI Technique

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**Review time:** 6 Days and 8 Hours

<b>Scientific quality</b>	<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
<b>Language quality</b>	<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
<b>Conclusion</b>	<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
<b>Re-review</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Peer-reviewer</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous

statements

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

## SPECIFIC COMMENTS TO AUTHORS

Dear authors! I read with pleasure and interest your manuscript "Gaseous metabolites as therapeutic targets in ulcerative colitis", which is a narrative review. In the manuscript under review several problems were raised, including association of diet, intestinal microbiome, its metabolites and flow of an inflammatory bowel disease (namely, ulcerative colitis). The paper is well-organized, clearly written, contains novelty and, in my opinion, worth publishing. The principal drawback of the main topic discussed in the paper, is that it can be hardly supported directly at the current stage of technology. However, this point is partially mentioned by the authors in the Biomarkers for assessing response of dietary therapy section. There are some minor comments that require authors' attention.

1. In the abstract, the role of H<sub>2</sub>S (only is discussed). I would suggest to revise the abstract in accordance to what is discussed in the paper. Please, pay attention to the keywords as well.
2. The role of dysbiosis in pathogenesis of ulcerative colitis is not commonly accepted. Please, revise the statement of the paragraph 1 on page 6, accordingly.
3. In table 1, please use the other markers to refer the footnotes, as superscripted 1-3 seems weird (ml<sup>2</sup> or kg<sup>3</sup>). Here, references [32] and [34] seem inappropriate. Please, provide the table's title before the table.
4. Figure 1 is not clear. Could you explain what is shown in the main part of the picture (not in the text boxes)? The text labels don't match the figure itself.
5. Minor language polishing is required.