

PEER-REVIEW REPORT

Name of journal: *World Journal of Clinical Cases*

Manuscript NO: 72345

Title: Role of Metabolites derived from Gut microbiota in inflammatory bowel disease

Provenance and peer review: Invited manuscript; externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 06080523

Position: Peer Reviewer

Academic degree: MD, PhD

Professional title: Academic Research, Assistant Professor

Reviewer's Country/Territory: Brazil

Author's Country/Territory: China

Manuscript submission date: 2021-10-12

Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-11-03 10:29

Reviewer performed review: 2021-11-09 20:06

Review time: 6 Days and 9 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 Grade E: Do not publish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 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 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	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous

statements

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

SPECIFIC COMMENTS TO AUTHORS

In this review the authors aimed to describe the characteristics of gut metabolome, to discuss the techniques involved and to describe the integration of metabolomics with other data. Furthermore, the authors aimed to discuss untargeted research of IBD, target metabolomics with focus on SCAFS, bile acids and tryptophan metabolism. In final, small molecule discovery, diagnostic potential, and therapeutic manipulation of the gut microbiome-metabolome axis as the future directions is discussed. It is an interesting paper regarding the relationship between microbiome and metabolome in IBD patients. As this is an area still under investigation, I would like to suggest to the authors to discuss deeply the studies cited, such as in page 6, the paragraph: "Untargeted metabolomics researches are also carried out among the human biological samples, involving urine, serum and/or plasma and intestinal biopsy samples[47]. Compared with control group, the level of urinary mammalian-microbial co-metabolite hippurate is reduced, and tricarboxylic acid cycle intermediates and amino acid metabolism in IBD group are altered[48]." What is the role of these metabolites in the intestine? What is the repercussion for IBD patients? On Tryptophan subtitle, I missed a link between tryptophan and the other metabolites mentioned, such as GLP 1 and others. The meaning of GLP1 is missing, as the meaning of AhR. Other's meanings are missing, such as LBP. Please review all the abbreviations used in the text. The article will benefit from English review.

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Reviewer's code: 06125621

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor

Reviewer's Country/Territory: Italy

Author's Country/Territory: China

Manuscript submission date: 2021-10-12

Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-11-03 07:08

Reviewer performed review: 2021-11-14 17:10

Review time: 11 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 type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input checked="" type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
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Conflicts-of-Interest: [] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

Zheng and Wen approached a complex but cutting edge topic which is metabolomics in IBD. The quality of the cited articles and its scientific content are high, however I think this article would be suitable for publication after major revisions: 1) The overall English syntax is good apart from the abstract, the first introductory paragraph and the section "Characterization of the intestinal metabolome". Here you can find some spelling errors and some sentences are also difficult to read and understand. Please improve the general English structure in these sections. 2) While it is generally accepted that the microbiome plays an important role in the pathogenesis of IBD, the authors should not be tempted to overemphasize the effect of diet in the increasing incidence and prevalence of these diseases as there are many factors that are involved. . REF: doi: 10.1111 / jgh.14872 3) The metabolomics of IBD is a broad topic. However, I think the information provided in this article can be summarized to improve overall readability. 4) Provide some tables or pictures to make it immediately clear the effect of the metabolite on the gastrointestinal system and how it is affected by the diet.