

## PEER-REVIEW REPORT

**Name of journal:** *World Journal of Clinical Cases*

**Manuscript NO:** 75509

**Title:** Intestinal mucosal barrier in functional constipation: Dose it change?

**Provenance and peer review:** Unsolicited manuscript; externally peer reviewed

**Peer-review model:** Single blind

**Reviewer's code:** 02440884

**Position:** Editorial Board

**Academic degree:** MD

**Professional title:** Chief Doctor, Full Professor, Professor, Senior Lecturer

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

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

**Manuscript submission date:** 2022-02-01

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2022-02-15 16:18

**Reviewer performed review:** 2022-02-15 17:19

**Review time:** 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 Grade E: Do not publish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 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

In the descriptive experimental study the structure of the intercellular occludens junction is investigated in functional constipation. The authors demonstrate neither a significant change in the junction ultramorphology nor in the expression and synthesis of the transmembrane protein occludin and the ZO1. However, there was an increase in goblet cells, but without activation of mucosal immunity or increased gut permeability. Comment: 1. Is there any change in ultrastructure, in particular is there an increase in the length of the zonula occludens in functional constipation? 2. In addition to occludin, the claudin proteins are important transmembrane proteins of the zonula occludens. The molecules are mentioned in the Introduction of the manuscript. It comes not clear to the reader that the investigations are focussed on occludin and claudins are not further studied. This point should be addressed by additional experiments or some explanations in the body of the Introduction and/or Discussion.

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**Title:** Intestinal mucosal barrier in functional constipation: Dose it change?

**Provenance and peer review:** Unsolicited manuscript; externally peer reviewed

**Peer-review model:** Single blind

**Reviewer's code:** 02567669

**Position:** Editorial Board

**Academic degree:** MD

**Professional title:** Emeritus Professor

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

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

**Manuscript submission date:** 2022-02-01

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2022-02-22 20:48

**Reviewer performed review:** 2022-02-28 20:35

**Review time:** 5 Days and 23 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 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
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<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**

This manuscript yields comprehensive data about the barrier function of the intestine in functional constipation. The authors investigated interepithelial lymphocytes, lymphocytes in the lamina propria, ultrastructural findings in the tight junctions, mRNA data of expression of tight junctions proteins and found no alterations in FC patients as compared to healthy subjects. The only difference was found in the count of goblet cells and, possibly, in the expression of intestinal mucus. From the data, the authors conclude, that in FC patients the intestinal barrier function remains intact, and an increased permeability of the intestinal mucosa doesn't play a role in pathogenesis of FC. The data are convincing. My only concern relates to the functional tests of gut permeability: Zonulin family proteins and intestinal fatty acid binding protein in the serum (and potentially in the stool). Have the authors done these tests, too? If yes, I suggest to include these data into the present manuscript.