

PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

Manuscript NO: 33433

Title: The effect of enteropathogenic escherichia coli endotoxin (EPEC) on the intestinal barrier function and the expression of TLR 2, 4 in IEC-18 Cells

Reviewer's code: 00058401

Reviewer's country: Brazil

Science editor: Ya-Juan Ma

Date sent for review: 2017-02-24

Date reviewed: 2017-03-06

| CLASSIFICATION | LANGUAGE EVALUATION | SCIENTIFIC MISCONDUCT | CONCLUSION |
|---|---|--|--|
| <input type="checkbox"/> Grade A: Excellent | <input type="checkbox"/> Grade A: Priority publishing | Google Search: | <input checked="" type="checkbox"/> Accept |
| <input type="checkbox"/> Grade B: Very good | <input type="checkbox"/> Grade B: Minor language polishing | <input type="checkbox"/> The same title | <input type="checkbox"/> High priority for publication |
| <input checked="" type="checkbox"/> Grade C: Good | <input checked="" type="checkbox"/> Grade C: A great deal of language polishing | <input type="checkbox"/> Duplicate publication | <input type="checkbox"/> Rejection |
| <input type="checkbox"/> Grade D: Fair | <input type="checkbox"/> Grade D: Rejected | <input type="checkbox"/> Plagiarism | <input type="checkbox"/> Minor revision |
| <input type="checkbox"/> Grade E: Poor | | <input checked="" type="checkbox"/> No | <input type="checkbox"/> Major revision |
| | | BPG Search: | |
| | | <input type="checkbox"/> The same title | |
| | | <input type="checkbox"/> Duplicate publication | |
| | | <input type="checkbox"/> Plagiarism | |
| | | <input checked="" type="checkbox"/> No | |

COMMENTS TO AUTHORS

Congratulations for the quality of the paper, We regretted no comment about the absence of a single reference of the importance of the the role of the the thigh cellular junction, in the intestinal barrier, mainly if we consider that former report credits probiotic as having a protective action on it. All the best

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Manuscript NO: 33433

Title: The effect of enteropathogenic escherichia coli endotoxin (EPEC) on the intestinal barrier function and the expression of TLR 2, 4 in IEC-18 Cells

Reviewer's code: 00039368

Reviewer's country: Estonia

Science editor: Ya-Juan Ma

Date sent for review: 2017-02-24

Date reviewed: 2017-03-13

| CLASSIFICATION | LANGUAGE EVALUATION | SCIENTIFIC MISCONDUCT | CONCLUSION |
|--|--|--|--|
| <input type="checkbox"/> Grade A: Excellent | <input checked="" type="checkbox"/> Grade A: Priority publishing | Google Search: | <input checked="" type="checkbox"/> Accept |
| <input checked="" type="checkbox"/> Grade B: Very good | <input type="checkbox"/> Grade B: Minor language polishing | <input type="checkbox"/> The same title | <input type="checkbox"/> High priority for publication |
| <input type="checkbox"/> Grade C: Good | | <input type="checkbox"/> Duplicate publication | |
| <input type="checkbox"/> Grade D: Fair | <input type="checkbox"/> Grade C: A great deal of language polishing | <input type="checkbox"/> Plagiarism | <input type="checkbox"/> Rejection |
| <input type="checkbox"/> Grade E: Poor | | <input checked="" type="checkbox"/> No | <input type="checkbox"/> Minor revision |
| | <input type="checkbox"/> Grade D: Rejected | BPG Search: | <input type="checkbox"/> Major revision |
| | | <input type="checkbox"/> The same title | |
| | | <input type="checkbox"/> Duplicate publication | |
| | | <input type="checkbox"/> Plagiarism | |
| | | <input checked="" type="checkbox"/> No | |

COMMENTS TO AUTHORS

This is a very well designed, performed and written experimental study for investigation of the effect of enteropathogenic Escheria coli (E.coli) endotoxin and the effect of bifidobacteria on the expression of TLR2 and TLR4 mRNA and protein in intestinal epithelial cells and possible influence of intestinal barrier function of cells and its role in pathogenesis of inflammatory bowel diseases (IBD). For investigation of this aim the authors created and used a rat small intestinal epithelial cell line and as a methods qRT-PCR and western blot as well as an epithelial cell membrane resistance measurement. The authors found that enteropathogenic E. coli promoted the expression of TLR2 and TLR4 and increase cell membrane permeability. The important finding of this study was that in contrast, bifidobacteria inhibited the expression of TLR2 and 4 and prevented the TLRs-mediated inflammation. The study is set up correctly. The paper is written well. Introduction gives a good overview of the study background and the authors raised clearly the aim of the study. The aim of the study is fulfilled. The



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material studied is large enough and allows to draw the conclusions. The Tables and Figure of high quality give a good overview about the results. This study makes a contribution to better understanding of the role of alterations in gut microbiota in modulation of intestinal barrier function and its possible role in pathogenesis of IBD. This study analyzed the potential protective role of bifidobacteria on intestinal epithelial cells through the regulation of TLR2 and TLR4 expression and the cell membrane permeability. This experimental study may have also the practical application because of bifidobacteria can provide a protective role through inhibiting inflammation and preventing the penetration of pathogenic bacteria in intestinal barrier function in patients with IBD.