

ESPS PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

ESPS manuscript NO: 20486

Title: Dimethyl sulfoxide inhibits zymosan-induced intestinal inflammation and barrier dysfunction

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CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	Google Search:	<input type="checkbox"/> Accept
<input type="checkbox"/> Grade B: Very good	<input checked="" 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 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

Review of manuscript for WJG "Dimethyl sulfoxide inhibits zymosan-induced intestinal inflammation and barrier dysfunction." by Li Y-M et al (ESPS Manuscript NO: 20486). This experimental study considered the investigation of the effects of dimethyl sulfoxide (DMSO) on inhibition of gut inflammation and intestinal barrier dysfunction following zymosan-induced intestinal inflammation and barrier dysfunction. The authors have used rat models and examined the different parameters for characterization of intestinal inflammation like the level of TNF- α , IL-10 in intestine of rats, determination of intestinal tissue myeloperoxidase activity, malonaldehyde content in intestine, superoxide dismutase activity in intestine, measurement of intestinal mucosal blood flow, determination of diamine oxidase activity to assess gut barrier function. The influence of DMSO on the level of intestinal epithelial tight junction protein ZO-1 was observed by immunofluorescence method. The intestinal injury was evaluated using an intestinal histological score and apoptosis if intestinal epithelial cells using TUNEL staining. The main finding of this study was that DMSO inhibits zymosan-induced intestinal inflammation and barrier dysfunction. This study may have

also in the future important clinical outcome because provide evidence for the possible mechanism of DMSO in regulating intestinal barrier function after zymosan-induced intestinal inflammation. This is a well written and set up study. The authors give a sufficient overview about the study background and raised clearly the hypothesis of the study. The aim of the study is fulfilled. The Results are presented sufficiently well and have been discussed well; the 9 figures give good overview about the results and are presented correctly. However, the following points need to be considered: 1. In Material and methods by description of Animal grouping and treatment (p. 5) it is not clear how many animals were included at the initial point of study. 2. The description of ELISA for determination of TNF- α and IL-10 levels should be more detailed. It is not clear how was the small intestinal tissue proceeded for ELISA? 3. By description of immunofluorescence method for evaluation of epithelial tight junction protein, ZO-1 it is necessary to mention using the negative control. Also it is not clear how the authors scored the intensity of positive staining for ZO-1 in the examined sections. Also, how can be explained the immunofluorescence staining of some cells (lymphocytes?, dendritic cells?) in Lamina propria of intestinal villus (Figure 8, B, D, H, I)? 4. The abbreviation of DAO appears for the first time in the Abstract and on the p. 6 (by description of Blood and intestinal samples), but its explanation is later, on p.8 (diamine oxidase). Also it would be correct to explain the abbreviation of SNK-q analysis by description of Statistical analysis on p. 9 (Student-Newman-Keuls (SNK))? 5. In the Figure 5 Legend absent the identification of groups studied: SS, SD, ZS, and ZD.