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315-321 Lockhart Road, Wan Chai, Hong Kong, China

## ESPS Peer-review Report

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

**ESPS Manuscript NO:** 9358

**Title:** Alterations of rat enterocyte mitochondrial respiratory function and enzyme activities following traumatic brain injury.

**Reviewer code:** 00506034

**Science editor:** Gou, Su-Xin

**Date sent for review:** 2014-02-10 13:48

**Date reviewed:** 2014-02-12 19:37

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	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 type="checkbox"/> Grade B: minor language polishing	<input type="checkbox"/> Existed	<input type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C (Good)	<input type="checkbox"/> Grade C: a great deal of language polishing	<input type="checkbox"/> No records	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D (Fair)	<input type="checkbox"/> Grade D: rejected	BPG Search:	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E (Poor)		<input type="checkbox"/> Existed	<input type="checkbox"/> Major revision
		<input type="checkbox"/> No records	

## COMMENTS TO AUTHORS

Authors explored the alterations of rat enterocyte mitochondrial respiratory function and enzyme activities following traumatic brain injury(TBI). Mitochondrial dysfunction may play an important role in TBI-induced gastrointestinal dysfunction. The paper is interesting and new. However, it is still some of the problems. They should also study mitochondrial morphology, ultrastructural changes and mitochondria - Related Genes following traumatic brain injury(TBI).



**ESPS Peer-review Report**

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

**ESPS Manuscript NO:** 9358

**Title:** Alterations of rat enterocyte mitochondrial respiratory function and enzyme activities following traumatic brain injury.

**Reviewer code:** 00220901

**Science editor:** Gou, Su-Xin

**Date sent for review:** 2014-02-10 13:48

**Date reviewed:** 2014-02-21 01:23

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	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 type="checkbox"/> Grade B: minor language polishing	<input type="checkbox"/> Existed	<input type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C (Good)	<input type="checkbox"/> Grade C: a great deal of language polishing	<input type="checkbox"/> No records	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D (Fair)	<input type="checkbox"/> Grade D: rejected	BPG Search:	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E (Poor)		<input type="checkbox"/> Existed	<input type="checkbox"/> Major revision
		<input type="checkbox"/> No records	

**COMMENTS TO AUTHORS**

In the experimental study by Zhu et al. "Alterations of rat enterocyte mitochondrial respiratory function and enzyme activities following traumatic brain injury." the authors have investigated the alterations in enterocyte mitochondrial respiratory function in male rats after traumatic brain injury (TBI). The study is original and the findings are interesting. I have several comments as follows: 1. In the last paragraph of Introduction section instead of writing "... to reveal the laws of the alterations of rat enterocyte....." it would be better to write "... to reveal the mechanisms of the alterations of rat enterocyte.....". 2. The results are derived only from male rats and there could be sexual dimorphism in enterocyte functions. Therefore the authors need to mention this limitation of the study in discussion section. 3. There are some literature data regarding the effects of pituitary hormones (glucocorticoids, prolactin and growth hormone) on intestinal metabolism and development. Recent clinical (Tanriverdi F. et al. Clin Endocrinol (Oxf). 2008, 68(4):573-9, Tanriverdi F et al. Brain Inj. 2007, 21(4):433-9.) and experimental (Kasturi BS, J Neurotrauma. 2009 26(8):1315-24.) data clearly demonstrated that TBI may cause acute and chronic pituitary dysfunction. This interesting detail could be discussed briefly in discussion section. 4. There are lots of abbreviations (PDH, RCR, BCA, BSA, KGDH etc...) throughout the text. Please write the open forms of them when using in the text for the first time.



**ESPS Peer-review Report**

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

**ESPS Manuscript NO:** 9358

**Title:** Alterations of rat enterocyte mitochondrial respiratory function and enzyme activities following traumatic brain injury.

**Reviewer code:** 00775802

**Science editor:** Gou, Su-Xin

**Date sent for review:** 2014-02-10 13:48

**Date reviewed:** 2014-02-21 08:32

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	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"/> Existed	<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"/> No records	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D (Fair)	<input type="checkbox"/> Grade D: rejected	BPG Search:	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade E (Poor)		<input type="checkbox"/> Existed	<input checked="" type="checkbox"/> Minor revision
		<input type="checkbox"/> No records	<input type="checkbox"/> Major revision

**COMMENTS TO AUTHORS**

This is a very interesting paper on the study of rat enterocyte mitochondrial respiratory function and activities of related enzymes following the TBI. Their findings demonstrated that rat enterocyte mitochondrial respiratory function and activities of PDH and KGDH decline following TBI. Activities of mitochondrial complex I and II are also changed after TBI. It provided evidence for the enterocyte mitochondrial dysfunction induced by the TBI, and my concerns on the current paper are as following: 1) Abbreviations should be defined when first used in the abstract or in the text. (e.g., pyruvate dehydrogenase (PDH);  $\alpha$ -ketoglutaric dehydrogenase (KGDH); malate dehydrogenase (MDH)...) 2) The English writing of this paper should be improved. Suggest that the manuscript be proof-read by a native language speaker to remove grammatical and typographical errors throughout. (e.g., page 9 change "reslut" to "result"... ) 3) On page 9, the authors mentioned that " We hypothesis the formation of first trough may be relative to intestinal ischemia, while the second trough may be just associated with intestinal reperfusion and intracranial hypertension." as well as the last sentence on the same page "We speculate on possible scenarios that complex III and IV may correlate with chronic oxidative stress, while complex I and II just are responsible to acute mitochondrial injury "Please add related references to support the hypothesis. 4) On page 8, the authors mentioned that " So we hypothesized mitochondrial dysfunction may play an important role in TBI-induced gastrointestinal dysfunction" however, in the current study, the authors just measured the rat enterocyte mitochondrial respiratory function and activities of related enzymes following the TBI. There is no direct evidence of gastrointestinal dysfunction induced by TBI. 5) In Table 1, please clarify



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the meanings of abbreviations (e.g., RCR and P/0).



ESPS Peer-review Report

Name of Journal: World Journal of Gastroenterology

ESPS Manuscript NO: 9358

Title: Alterations of rat enterocyte mitochondrial respiratory function and enzyme activities following traumatic brain injury.

Reviewer code: 00852498

Science editor: Gou, Su-Xin

Date sent for review: 2014-02-10 13:48

Date reviewed: 2014-03-01 17:44

Table with 4 columns: CLASSIFICATION, LANGUAGE EVALUATION, RECOMMENDATION, CONCLUSION. It lists various grades (A-E) and corresponding actions like 'Accept', 'High priority for publication', 'Rejection', 'Minor revision', and 'Major revision'.

COMMENTS TO AUTHORS

However being of potential clinical relevance, this paper will need major revision to be more understandable and follows the usual way of writing a scientific paper. The abstract is not clear because it does not state clearly the question that the authors aim to answer. Particularly, it would be useful that the authors explain the context and the state of the art in the introduction. The first use of abbreviation should be defined. The discussion should be rewrite to follow the usual order: briefly summarize the main result, compare the result with the published data, explain the limitations of the study and finally explain why this result is interesting and could change the future clinical practice. I think that there are a few other limitations that the authors have not stated, like the limited number of rats per group, the fact that the study was done on rats and not humans,... I do not share the enthusiasm of the authors when they are writing as a conclusion that "This study defines a new strategy to attenuate gastrointestinal complications after TBI by protecting mitochondrial function of intestinal epithelial cells." Because it was not the subject of the study and the authors have not studied how to protect motichondrial function, they have just studied how the mitochondrial function was altered. So I think that they cannot conclude that.