

ESPS PEER REVIEW REPORT

Name of journal: World Journal of Gastroenterology

ESPS manuscript NO: 11861

Title: Nitrite, a novel method to decrease ischemia/reperfusion injury in the rat liver

Reviewer code: 02876254

Science editor: Su-Xin Gou

Date sent for review: 2014-06-10 10:18

Date reviewed: 2014-07-23 01:43

| 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"/> Existing | <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 | <input type="checkbox"/> Existing | <input type="checkbox"/> Minor revision |
| <input type="checkbox"/> Grade E: Poor | | <input type="checkbox"/> No records | <input checked="" type="checkbox"/> Major revision |

COMMENTS TO AUTHORS

In this paper, Björnsson and Colleagues aim to investigate whether nitrite administration prevents liver ischemia/reperfusion injury (IRI). To reach their scope, the Authors used a rat model of liver IRI. In the animal group treated with nitrates before IRI transaminases were significantly lower, as well as anaerobic metabolism markers, than in the control or the sham-operated group. Accordingly, histopathological liver tissue sections demonstrated less injury in the treated group compared to controls. The paper is well written and could be of interest but a few comments might be addressed to it. Major comments: -

The Authors have three groups so they cannot use the t-test to assess statistical significance, rather analysis of variance should be used. - The Authors should determine the levels of antioxidant defenses in the liver of the three groups at the end of reperfusion.

- The Authors should give at least a speculative explanation about how nitrite administration protects the liver from IRI. -

How do the Authors explain the increase of NO_x in the sham group at the end of the observational period? No effect on NO_x should be observed in the sham group otherwise this could mean that the increase of NO_x during "reperfusion" might be ascribed to surgery (laparotomy) and not ischemia/reperfusion injury. - Authors perform histological evaluation and liver function tests at 4 hours and observe a significant difference but have they checked at longer follow ups(if the histology score or the liver function improves on its own is it worthwhile to worry?)

Minor comments: - The Authors state, in the Methods, that animal body temperature was kept between 3 and 39°C during surgery. Is this correct? It seems quite a wide



BAISHIDENG PUBLISHING GROUP INC

8226 Regency Drive, Pleasanton, CA 94588, USA

Telephone: +1-925-223-8242

Fax: +1-925-223-8243

E-mail: bpgoffice@wjgnet.com

<http://www.wjgnet.com>

range of body temperatures. If this is a mistake, please correct. - In the liver transaminase result section authors write that in the sham operated group AST and ALT were normal after reperfusion but if they were sham operated how could they have had a reperfusion The histology scores although different seem to point out very low values, was the damage altogether relatively non significant ?

ESPS PEER REVIEW REPORT

Name of journal: World Journal of Gastroenterology

ESPS manuscript NO: 11861

Title: Nitrite, a novel method to decrease ischemia/reperfusion injury in the rat liver

Reviewer code: 02821831

Science editor: Su-Xin Gou

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| CLASSIFICATION | LANGUAGE EVALUATION | RECOMMENDATION | 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 checked="" type="checkbox"/> Grade B: Minor language polishing | <input type="checkbox"/> Existing | <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 | <input type="checkbox"/> Existing | <input type="checkbox"/> Minor revision |
| <input type="checkbox"/> Grade E: Poor | | <input type="checkbox"/> No records | <input type="checkbox"/> Major revision |

COMMENTS TO AUTHORS

Interesting work showing interesting results but the author should show more data for histological analyses such as the number of animals used for each figure, the scores should be represented using a graph, and more photomicrographs should be shown with higher magnification.