

## PEER-REVIEW REPORT

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

**Manuscript NO:** 65240

**Title:** Increased systemic RNA oxidative damage and the diagnostic value of RNA oxidative metabolites during Shigella flexneri-induced intestinal infection

**Reviewer's code:** 00609434

**Position:** Peer Reviewer

**Academic degree:** PhD

**Professional title:** Associate Professor

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

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

**Manuscript submission date:** 2021-03-02

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2021-03-03 10:27

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**Review time:** 8 Days and 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 Grade E: Do not publish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 type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Re-review</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Peer-reviewer statements</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



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## **SPECIFIC COMMENTS TO AUTHORS**

The manuscript from Nie et al. is an in vivo study investigating the RNA and DNA oxidative stress through oxidated guanosine and deoxy-guanosine quantification in urines and tissues and blood inflammatory cytokine production in a rat model of intestinal *S. flexneri* infection. At the end of the study the authors suggest the possibility to use urinary quantification of 8-oxo-G as a reliable marker of infection due to a consistent positive correlation analysis. The article is informative and useful for the setup of a new and reliable diagnostic tool. The experiments are well targeted and demonstrate the authors' hypotheses, however there are several important points that should be addressed before the publication of this article that are listed below: 1) English should be thoroughly reviewed, some paragraphs are in a good form, others contain many mistakes, please check especially the materials and methods section. 2) The authors use many acronyms, and the most are well known to the scientific community, nevertheless they should mention the entire meaning of every acronym the first time they mention it in the text, or add a paragraph explaining all the acronyms used and their meaning, depending on the policy of the journal. 3) The abstract seems very long, it is not possible to shorten it to a more usual length for a research article? 4) In contrast, the Introduction could be longer, the state of the art is not completely described, for example no mention to the relevance during intestinal infection of the blood cytokines investigated by the authors, and what is already known on the rise of these specific cytokines during *S. flexneri* intestinal infection. 5) In the Results section there are several points to be clarified by the authors: -In the first paragraph, "Orally administered *S. flexneri* can provoke pathogen colonization and intestinal inflammation in rats", line 294 referring to (Figure 1a), please check if the sentence describes this panel because panel a) refers to feces bacterial count and not inflammation, furthermore for

what concerns the histological panels from b to g (Fig. 1) they should be described better in the text, with a short description referring to each panel. -In the second paragraph, “Changes of the WBC count and CRP level during the course of infection” the authors should carefully check CRP concentration measured because numbers are, for example,  $4.87 \pm 1.59 \times 10^6$  ng/mL and that means a blood concentration of 5 mg/mL, I frankly think that this is not possible, CRP is usually in the order of mg/L, maybe there is an error in the unit of measure? -In the third paragraph, “Induction of inflammatory cytokine production”, every time the authors describe a panel in Fig. 2 (referring to the quantification of a certain cytokine), they should mention in the text which panel they are referring to, to facilitate the reading and interpretation of the data by a reader. -In the “Correlation analysis” paragraph the word “predicative”, line 352, and also in the discussion, should be corrected with “predictive”. 6) Figures and Legends: in some legends, sometimes there is a description of the results. This is not the appropriate section to describe results, in the legend only the description of the content of the figures and panels and eventually the type of test and/or of instrument used should be present, together with the statistical analysis, and nothing more. -In Figure 1i where CRP is quantified, as already mentioned for the results, there is probably an error in the unit of measure, CRP can’t be 4 million ng/ml in the blood. -In Figures 4 and 5, in the graphs referring to the quantification of 8-oxoG and of 8-oxodG, the Y-scale reports the acronym IOD, please specify in the legend what IOD means and how this quantification was obtained from the analysis of the images.

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**Title:** Increased systemic RNA oxidative damage and the diagnostic value of RNA oxidative metabolites during *Shigella flexneri*-induced intestinal infection

**Reviewer's code:** 05457328

**Position:** Editorial Board

**Academic degree:** MSc, PhD

**Professional title:** Adjunct Professor, Associate Professor

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

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

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<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 checked="" type="checkbox"/> Accept (General priority) <input 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 statements</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

#### **SPECIFIC COMMENTS TO AUTHORS**

The manuscript is good, but LC-MS/MS data must be provided as the authors used.  
Also, the manuscript need English language correction throughout.