

Dear Reviewers,

Thank you for your suggestions.

Following the reviewers' helpful comments, we have made modifications to our manuscript in order to improve its quality. Please find below point-by-point responses, as well as the related changes, highlighted in yellow, in the revised version of our manuscript.

**Reviewer's code: 01434943**

This is a well conducted and adequately powered mouse study describing the time-course in the resolving phase after DSS-colitis.

We are grateful to the reviewer for this positive comment about our work.

The description is rather verbose and could be written in a more succinct and scientific way. English grammar requires attention throughout.

As recommended, we have used a professional language editing service to improve the quality of our manuscript. We paid attention in particular, to the necessary changes indicated in the abstract.

Discussion: In the context of growth factors, some reference should be made to prior work on costimulatory molecules/CD-28 (Grose et al) and the impact of exogenous growth factors such as IGF-I on DSS-colitis (Xian-CJ and Read-LC).

Regarding growth factor involvement in mucosal healing in the discussion section, we have added a new reference.

**Reviewer's code: 02456959**

Vidal-Lletjós et al (Manuscript Number: 48174) reported the "Mucosal healing progression after acute colitis in mice". Their finding is interesting. Their work further confirms the conclusions of previous studies, and set up a mouse model of inflammatory bowel diseases (IBD).

We thank the reviewer for this positive assessment.

However, there are several weaknesses in this work, which should be revised.

1. The quality of logic and presentation of the key idea is not very good, and this manuscript must be copyedited by native-English speakers before resubmit it.

As recommended, we have used a professional language editing service to improve the quality of our manuscript. In particular, we have shortened sentences to improve readability, removed repetitive, vague terms, and reduced overall wordiness. These modifications should enhance the quality of logic

related to the key idea. We have not, however, made deep changes to the overall structure since the key idea is based on a kinetics description of epithelial repair events.

2. On the section of Materials and Methods, the control groups must match the experimental groups one-to-one (day 0, day 5, day 7, day 10, day 13, and day 28).

We agree with the referee's comment. However, taking into account that the aim of this study was to document the longitudinal modifications of the colon mucosa and luminal ecosystem following an episode of chemically induced colitis, we did not use a time-paired match control groups on all occasions. Rather, we made most comparisons in reference to parameters measured in the day 0 group. We also know from previous studies performed with healthy rats that the diet used in this study does not impact the colon parameters that we measured.

Results should be expressed as means  $\pm$  SD (not SEM).

The present study is related to previous publications by our group on the topic using the DSS-model (Lan *et al.*, Am J Physiol Gastrointest Liver Physiol. , 2016 ; Vidal-Lletjos *et al.*, Nutrients 2019), in which the results were expressed as means  $\pm$  SEM. Therefore, in order to allow relevant comparisons between the different studies, we have expressed the results as means  $\pm$  SEM.

"All analysis were performed...." should be replaced by "All analysis was performed..." or "All analyses were performed...".

Thank you for this remark. We have made the changes accordingly.

3. On the section of Results, Please delete the redundancy sentences when the tables or figures have clearly showed the same information.

We have carefully checked the results section in order to allow presentation of complementary, but not redundant, information.

Please describe the specific statistical analysis values in the tables or figures, do not use p less than 0.05 to replace them.

Thank you for this remark. We have made the changes accordingly.

4. On the section of Discussion, the main findings, limitations, and authors' recommendations should be present more clearly and comprehensively.

This comment has been taken into account with help from the professional language editing service.

5. The Table, Figure, Reference, and special symbols must fit the journal's requirements or format.

Thank you for the helpful comment. We have made the appropriate changes.

**Reviewer's code: 00676138**

The authors have performed an interesting analyses of intestine inflammation and resolution. The gathered data are cohesive and dense, although some of them could be done at protein levels and with image. Nevertheless, the set of data fulfill a nice history and the conclusions are in accordance.

We appreciate the reviewer's evaluation of our research. We agree with the second line of this comment and address this point in the discussion section. In addition, part of the data at the protein level has been presented in Vidal-Lletjos et al. *Nutrients* 2019, in which we evaluated the impact of dietary protein amount on epithelial repair in the same model of colitis.

**Reviewer's code: 02441305**

The paper studied the kinetics of molecular and cellular events in association with mucosal adherent microbiota modifications involved in epithelial repair after an acute colon inflammation induced by DSS administration. The research question, the originality, the methods used, the conclusions, and the writing are all sound. Line 167, FDA→FD4 ? Line 169-170, 'to evaluate the impact of diet on epithelial reparation kinetics', what does it mean?

Thank you for your positive comments and for calling our attention to these errors. FDA has been replaced by FD4, and the use of reparation was a language mistake. The right term being repair, we have corrected it.

In addition to necessary changes pointed out by reviewers, we have made all amendments to the manuscript according to the Editor's requirements.

We thank the Editor and reviewers for their helpful comments that enabled us to improve the quality of our manuscript. We hope that it will now be considered acceptable for the *World Journal of Gastroenterology*.

While awaiting your response, we send you our best regards,

Annaïg Lan, PhD

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