

Dear Editor, Dear Reviewers,

We thank you for your critical, but constructive feedback on our manuscript. We carefully read the comments and suggestions and made corresponding modifications to the manuscript. We are confident to present a massively improved manuscript and hope that you are convinced about the scientific value of it. We highly appreciate your time for (re-)assessment of our work. In the following, we address all points raised by the Reviewers.

Reviewer #1:

Scientific Quality: Grade B (Very good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Accept (General priority)

Specific Comments to Authors: In this study, the authors found that Fpr2 participated in the regulation of cell cycle and cell proliferation, affecting the expression of IL-10 and CXCL-1, and playing an important protective role in maintaining liver homeostasis. These findings are very interesting. The study can give some suggestions to the study of the liver homeostasis. I have no specific comments to the authors. Well done.

Reply to Reviewer#1: Thank you for your suggestion. We have revised the language of the article.

Reviewer #2:

Scientific Quality: Grade B (Very good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

Specific Comments to Authors: Research on FPRs mainly focused on regulating inflammation, but increasing evidence showed that FPRs can also

regulate the host's defense process, including regulating the activation of neutrophils and dendritic cells, and participating in the host's resistance to bacterial infection, tissue damage, and wound healing. This discovery challenges the previously reported pattern of host defense against *Listeria*, that is, the receptor TLR2 on the host cell is activated by bacterial lipoprotein, and then CXCR2 ligand is produced to induce neutrophil accumulation. Fpr2 activated the downstream key signal molecules and produced chemokine CXCL1/2 to attract neutrophils, which indicated that Fpr2, as a chemotactic receptor, could not only attract neutrophils directly, but also indirectly control the chemotaxis of neutrophils by regulating the production of chemokines to resist infection. This study is designed to explore the role of this receptor in helping the host resist bacterial infections. The study is well designed and the results are very interesting. Comments: 1. The manuscript requires a minor editing. 2. How about the limit of the study? Please make a short discussion about it. 3. The images should be updated. Too small.

Reply to Reviewer#2: Thank you for your suggestion. We have revised the language of the article. The limitations of this article have been added at the end of the discussion section. The images were updated.

We are convinced that the recommended modifications and additions now have strongly improved our study and thus hope to receive a positive vote for publication.

Best regards,

Rongkuan Li

on behalf of all authors