Reviewer’s report

Title: Associations of microbiota and toll-like receptor signaling pathway in esophageal adenocarcinoma

Version: 0 Date: 28 Jul 2015

Reviewer: Heng Lu

Reviewer's report:

The manuscript identified the TLR family genes upregulation and TLR signaling pathway changes in modified levrat model, which could link microbiota recognition to tumorigenesis in esophageal adenocarcinoma. Further, authors analyzed the important microbial profiles of rat and human samples by using PCR-ESI-MS-TOF. In addition, FISH validated that E. coli and S. pneumonia presence in rat and human samples. Overall, the experimental design is impressive and clear, and plenty of interesting works had been done to support the conclusions. There are some suggestions to improve the manuscript and one question for discussion.

1. Statistical analysis paragraph should be reorganized into Methods, not in Results.

2. In Figure2, Are those TLRs changes confirmed by separate quantitative PCR respectively?

3. The resolution of Figure3, 4 and supFig2 is low.

4. What's GERD? It is a lack in Abbreviation.

5. In Figure6, there is a lack of TANE tissues as negative controls in FISH. Also it would be better to show the identification proofs of EAC, BE, and TANE.

6. The microbial profile is not quite consistent from the rat samples to human clinical samples. This leads to a mechanism question, whether TLRs and TLR signaling pathway changes are consensus in rat EAC and in human EAC.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes
Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?
If you can answer no to all of the above, write 'I declare that I have no competing interests' below. 
If your reply is yes to any, please give details below.

I declare that I have no competing interests

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal