Reviewer’s report

Title: Coreopsis tinctoria Nutt ameliorates high glucose-induced renal fibrosis and inflammation via the TGF-β1/SMADS/AMPK/NF-κB pathways

Version: 2 Date: 24 Jul 2018

Reviewer: Tahir Ali

Reviewer's report:

In the article titled "Ethyl acetate extract and marein from Coreopsis tinctoria Nutt ameliorate high glucose-induced renal fibrosis and inflammation via the TGF-β1/SMADS, AMPK and NF-κB pathways" by Yao et al, the authors investigated the protective effect of ethyl acetates extract and marein, a purified compound from the extract of Coreopsis tinctoria Nutt, in the in vitro studies of high glucose-induced diabetic nephropathy model. The study is interesting. However, there are several concerns.

1. The title of the manuscript should be re-arranged, I would suggest the following title for this research article "Ethyl acetate extract and marein from Coreopsis tinctoria Nutt ameliorate high glucose-induced renal fibrosis and inflammation via the TGF-β1/SMADS/AMPK/NF-κB pathways.

2. In abstract page # 3, line # 55~57 "It was also confirmed that AC and marein attenuated HG-induced renal inflammation and fibrosis by activating the AMPK, TGF-β1/Smads and NF-κB signaling pathways", should be re-write as "It was also confirmed that AC and marein attenuated HG-induced renal inflammation and fibrosis by regulating the AMPK, TGF-β1/Smads and NF-κB signaling pathways".

3. In abstract page # 3, line # 60 should be removed, no need for this sentence.

4. In the introduction on page 5 line # 105~106 "However, the molecular targets and active constituents still need to be determined". Should be removed from here, the most appropriate place for this sentence is discussion last ending remarks. Similarly, no need of the sentence "In a previous study, the main flavonoid of AC, marein, was detected and analyzed with high-performance liquid chromatography/mass spectrometry [23]".

5. In the section # 2, material and methods, subsection immunofluorescence staining, the start of the sentence is not appropriate, the author should mention the procedure of cells growing and treatment for the immunofluorescence staining. How they culture the cells? Used chamber slides or 6 well plates? , after providing this information's the author has to mention the cells were fixed with 4% paraformaldehyde……
6. In the result section page # 10, line 200, the figure 2 and 3 should be written as figure 2A-C and 3A-C).

7. In the result section page # 12, line 250, figure 6 should be written as figure 6A, B.

8. Through the manuscript, the antibody name for the p-65 should be written as "NF-κB P65".

9. Figure legends should be re-write in detail and comprehensive way. No need of note for the panels e.g. A, B.

10. The graphical presentation for the quantification of the results is very confusing. In order to make easy for the readers, I would suggest to the authors present all the graphs in a more clear format e.g., colored graphs should be prepared.

11. The whole manuscript should be double check for the minor grammatical errors.

**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/](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