Reviewer’s report

Title: Application of Network Pharmacology and Molecular Docking to Elucidate the Potential Mechanism of Eucommia ulmoides-Radix Achyranthis Bidentatae against Osteoarthritis

Version: 0 Date: 29 Jun 2020

Reviewer: Zetian Zheng

Reviewer's report:

This is a paper that investigated the potential mechanism of Eucommia ulmoides-Radix Achyranthis Bidentatae (EU-RAB) against Osteoarthritis. The potential bioactive ingredients and putative targets of EU-RAB that treated Osteoarthritis were predicted through the integration of public databases mining, Network Pharmacology Strategy as well as molecular docking technology. In addition, the potential biological functions and related signaling pathway of this medicine were also uncovered, helps us to further understand how the drug works. I would suggest the author to further complete the following revisions.

1. In the introduction part, it mentions that "Research have shown that EU is currently the most widely used Chinese medicine for the treatment of OA, and RAB is ranked third". But which medicine is in second place? Why it was not included in the analysis should be further explained.

2. Please add to the reference, the "In the past, Chinese medicine was regarded as an empirical medicine...", you are mentioning in this line, otherwise it would be a litter subjective. There are several similar issues in the article.

3. In section 2.3, "Osteoarthritis targets acquired from two databases", GeneCards and OMIM databases were used to obtain potential Osteoarthritis targets. Is there any other database to widen your potential targets of ingredients?

4. In section 2.4, "setting a confidence score with correlation degree ≥ 0.400", please explain why this threshold was used, is it a default threshold or recommended use from other studies?

Publons Reviewer Recognition. Springer Nature can send verification of this review directly to Publons (a subsidiary of Clarivate Analytics). If you would like to take advantage of this service, please click on the “Yes” option below. Your name, email address, title of the reviewed manuscript, name of the journal, and date of your review submission (the “Review Data”) will then be transmitted to Publons upon publication of the manuscript. If you have already registered at Publons, they will notify you of the receipt of this review and update your profile as per your settings and their policy. If you are not registered with Publons, you will receive an email from them asking you to register in order for them to be able to recognize your review on your new profile page. Publons may use the Review Data to generate derivative metadata for the benefit of Publons and you as a reviewer, carefully considering the sensitivity of such information. For example, Publons may verify your record as a reviewer by updating your profile published on its
webservice if you have registered for such service or help editors to identify candidate reviewers. Please find the details of processing in Publons’ privacy policy https://publons.com/about/terms

No

**Level of interest**
Please indicate how interesting you found the manuscript:

An article whose findings are important to those with closely related research interests

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

Needs some language corrections before being published

**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