Reviewer’s report

Title: Protective effect of ethyl acetate fraction from Semen sojae germinatum, the processed sprout of Chinese black soybean, on rat experimental osteoarthritis

Version: 1 Date: 21 Feb 2020

Reviewer: Research Square Reviewer 1

Reviewer's report:

PEER REVIEWER ASSESSMENTS:

OBJECTIVE - Full research articles: is there a clear objective that addresses a testable research question(s) (brief or other article types: is there a clear objective)?
Yes - there is a clear objective

DESIGN - Is the current approach (including controls and analysis protocols) appropriate for the objective?
Yes - the approach is appropriate

EXECUTION - Are the experiments and analyses performed with technical rigor to allow confidence in the results?
Yes - experiments and analyses were performed appropriately

STATISTICS - Is the use of statistics in the manuscript appropriate?
Yes - appropriate statistical analyses have been used in the study

INTERPRETATION - Is the current interpretation/discussion of the results reasonable and not overstated?
Yes - the author's interpretation is reasonable

OVERALL MANUSCRIPT POTENTIAL - Is the current version of this work technically sound? If not, can revisions be made to make the work technically sound?
Yes - current version is technically sound

PEER REVIEWER COMMENTS:

GENERAL COMMENTS: Authors have been able to prove that the inflammatory status of the synovial membrane was improved, and the levels of inflammatory cytokines IL-1β and TNF-α in synovial fluid were decreased in rats administrated with EAF from the extract. This study has helped to show the antiosteoarthritic effect of a traditional extract using an in vivo model. This study is part of the continuous effort to elucidate the mechanism of this TCM. Other researchers can capitalize on these findings to develop any bioproduct with therapeutic properties.
This study is well designed. The methodology is to an acceptable standard using several biochemical and histological techniques. The authors have performed an excellent experiment to validate the ethyl acetate fraction of Semen sojae germinatum. I have checked the published literature; the authors are proceeding with previous experiments from their team. The design is reproducible and the methodology well described. The scientific writing is of acceptable quality. The revisions undertaken also are satisfactory.

**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.

I am able to assess the statistics

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

Acceptable

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