Author's response to reviews

Title: Neuroprotective effects of Psoralea corylifolia Linn seed extracts on mitochondrial dysfunction induced by 3-nitropropionic acid

Authors:

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Author's response to reviews: see over
Dear Editor-in-Chief

I, along with my coauthors, would like to ask you to consider the attached manuscript entitled “Neuroprotective effects of Psoralea corylifolia Linn seed extracts on mitochondrial dysfunction induced by 3-nitropropionic acid” for publication in BMC Complementary & Alternative Medicine as an original article.

In this study, we showed that pretreatment of PC12 cells with Psoralea corylifolia Linn seed extracts significantly attenuated 3-nitropropionic acid (3-NP)-induced mitochondrial dysfunction and cell death. Thus, our results indicate that P. corylifolia Linn seed extracts may have potential applications as therapeutic agents for treating neurodegenerative diseases.

Reviewers' report

Reviewer 1: Germain Sotoing Taiwe

Major compulsory revisions

- Method: What was the basis for your choice of the concentration of extract and type of extract used in the study?

→ Considering the effect and cytotoxicity, we routinely used the dose of 10, 50, 100 ug/ml for in vitro system in our lab. (Reference: Im et al., The American journal of Chinese Medicine, (2013), 41(6): 1343-1359, Im et al., Cell Mol Neurobiol., (2013), 33:625-635)

-Results: In the results section the author should provide the degrees of freedom used in the ANOVA considering the following format F (degrees of freedom: two values) = value, p<value

→ This revision has been made per the Reviewer’s suggestion.

- Results: You must to determine the DRC of an aqueous extract of Psoralea corylifolia and standard drugs, in your experimental conditions. If you want to investigate the Neuroprotective activity of
Psoralea corylifolia extract, you have to compare EC50 and efficacy (Neuroprotective) and to demonstrate which compound or reference drug is the more effective. The study would be greatly improved by including the DRC.

→ Thank you for the insightful comments. This insight will help us design our future experiments.

Minor essential revisions

- Check for grammatical mistakes throughout the text according to the instruction for authors.
→ This revision has been made per the Reviewer’s suggestion. (I attached certificate of English editing.)

Reviewer 2: Sangmi Han

Major compulsory revisions

- Need to explain in detail prep of P. corylifolia. → This revision has been made per the Reviewer’s suggestion.

- Yield of extracts? Extraction yield of PCWE was 20.6% and PCEE was 20.4%.

- Need to discuss substance of P. corylifolia seed which have neuroprotective effects. → This revision has been made per the Reviewer’s suggestion.

- Images of figure 3 and 4, treatment of 50 ug/ml both PCWE and PCEE seems to be not effective compared to 10 and 100 ug/ml. Need to discuss

→ This revision has been made per the Reviewer’s suggestion.

Minor Essential Revisions

- Write plantaion of the P. corylifolia. → This revision has been made per the Reviewer’s suggestion.

- Correct the notation of materials (company, state, country) → This revision has been made per the Reviewer’s suggestion.

- Write PC12 cells where to get or purchase. → This revision has been made per the Reviewer’s suggestion.

- At Figure 1, missing the unit of treatment
→ This revision has been made per the Reviewer’s suggestion.

Reviewer 3: Vadde Ramakrishna

# Major compulsory revisions
1. Active component present in the aqueous and ethanol extract gives more strength for the results. LC MS data strengthen publication

→ Thank you for the insightful comments. This insight will help us design our future experiments.

# Minor revisions

In figures, only one * significance has been mentioned. What about ** and *** significance.
→ This revision has been made per the Reviewer’s suggestion.

Additional material submitted by the reviewers

Major compulsory revisions

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- Results: You must to determine the DRC of an aqueous extract of Psoralea corylifolia and standard drugs, in your experimental conditions. If you want to investigate the Neuroprotective activity of Psoralea corylifolia extract, you have to compare EC50 and efficacy (Neuroprotective) and to demonstrate which compound or reference drug is the more effective. The study would be greatly improved by including the DRC.

→ Thank you for the insightful comments. This insight will help us design our future experiments.

Minor essential revisions

- Check for grammatical mistakes throughout the text according to the instruction for authors.

→ This revision has been made per the Reviewer’s suggestion.
Thank you for your consideration. I look forward to hearing from you.

Sincerely,

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