Reviewer's report

Title: In vitro and ex-vivo cellular antioxidant protection and cognitive enhancing effects of an extract of Polygonum minus Huds demonstrated in a Barnes Maze animal model for memory and learning.

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Reviewer: Som Dutt

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The article entitled “In vitro and ex-vivo cellular antioxidant protection and cognitive enhancing effects of an extract of Polygonum minus Huds demonstrated in a Barnes Maze animal model for memory and learning.” by Annie George1, Chee Perng Ng, Matthew O’Callaghan, Gitte S. Jensen, Hoi Jin Wong examined aqueous extract (LineminusTM) of Polygonum minus Huds for its antioxidant activity and evaluated its effect on the Cognitive function using scopolamine induced cognition deficits in rodent

The work pertains to plant whose leaves are used as a flavouring ingredient in culinary dishes and also has medicinal properties. Though, the present work is of preliminary nature but quite important. The manuscript is well written. Methodology is described nicely. Results are well presented and discussed. However below mentioned points need to be explained/checked. So, article is recommended for publication after minor revisions.

1. Antioxidant activity of Polygonum minus has already been reported in other published research papers (for examples reference no 8, and 9 cited in this manuscript). Author need to explain the need to re do it the antioxidant activity estimation and how much the present results of antioxidant activity differ from the earlier reported data and why ??

2. In the Abstract, conclusion reads as “These data suggest that P. minus has protective properties that enhance cognition possibly as a result of antioxidant and anticholinesterase activity”. As in this study all experimentation were performed using extract and not the purified antioxidant fraction (s) from the extract thus it will be bit imaginary statement that the cognition enhancement may be due to antioxidant activity. Therefore the conclusion needs to be rewritten.

Level of interest: An article of limited interest
Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests