Reviewer's report

Title: Anti-stress and neuronal cell differentiation induction effects of Rosmarinus officinalis L. essential oil

Version: 0 Date: 02 Oct 2017

Reviewer: Shih-Shun Chen

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Comments for BCAM-D-17-01149

The manuscript has provided a mechanism of Rosmarinus officinalis EO (ROEO)-induced rat renal medulla-derived PC12 cell differentiation. The authors also show that ROEO inhalation did decrease the levels of immobility time and serum corticosterone as well as increase the level of brain dopamine in ICR mice. There are few concerns/comments that needs to be addressed:

1. It is not clear how control the volume and rate of ROEO inhalation in ICR mice.
2. They mainly based on the results of acetylcholine, choline, and Gap43 gene expression to examine the ROEO-induced neuronal differentiation in PC12 cells. The authors need to examine neuronal markers to bolster their claims.
3. The effect of the ROEO on the AChE activity need to be shown in Figure 4.
4. The authors need to explain the rational of using PC12 cells and male (not for female) ICR mice as the study models?

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.

No
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:

Needs some language corrections before being published

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