Reviewer's report

Title: An investigation into the ameliorating effect of black soybean extract on learning and memory impairment

Version: 2 Date: 7 May 2014

Reviewer: Dae-OK Kim

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Minor Essential Revisions

Authors demonstrated that black soybean extract ameliorated learning and memory impairment in vitro and in vivo models. Furthermore, the active compounds such as epicatechin and procyanidins B1 and B2 were identified. This manuscript is recommended to be published in ‘BMC Complementary and Alternative Medicine’ with minor revision.

Comments/Suggestions
1. Line 32: Change the word ‘PhD’ into ‘Ph.D.’.
2. Line 52: The word ‘edefcts’ is typo.
3. Line 80: Delete the last letter ‘s’ in the word ‘phenolicss’.
4. Line 137: Change the word ‘2’,7,-dichlorofluorecein’ into ‘2’,7’,-Dichlorofluorescein’.
5. Line 139: Insert a space between ‘lactate’ and ‘dehydrogenase’.
6. Lines 166-167: Change the phrase ‘2’,7,-dichlorofluorecein diacetate (DCF-DA)’ into ‘DCF-DA’
7. Line 170: The word ‘dichlorofluorecein’ is typo.
8. Line 195: Revise the word ‘KOREA’ in small letters.
9. Line 254: Insert a space between ‘2’ and ‘min’.
10. Lines 360-361: Why was the passive avoidance test performed 4 days after Abeta injection?
11. Line 391: Change the phrase ‘figure 4A, The’ into ‘Figure 4A, the’.
12. Line 417: Insert the word ‘and’ before ‘N20’.
13. Line 437: Delete the word ‘respectively’.
14. Line 451: The word ‘proanthocayanidins’ is typo.
15. Line 498: Change the chemical name ‘2-diphenyl-1-picrylhazdyl’ into ‘2,2-diphenyl-1-picrylhydrazyl’.
16. Line 499: In the word ‘alzheimer’s, the letter ‘a’ should be in large letter.
17. Line 502: The word ‘dichlorofluorecein’ is typo.
18. Line 562: Use small letters in words such as ‘Amyloid’ and ‘Cells’.
19. Line 588: Check the page numbers shown.
20. Line 598: Write a full name of journal.
22. Line 631: Check the page numbers shown.
23. Page 30 Figure 2A: Why did LDH release decrease at concentration of 12 ug/mL compared to 25 ug/mL?
24. Page 31 Figure 3A: The words ‘Alternation’ in y-axis title and figure legend are typo.
25. Page 33 Figure 5: Chemical structures are wrong. The structure in Figure 5B is catechin. In epicatechin, Both B-ring and 3-OH should be backward or forward. Procyanidin B1 is a dimer having ‘epicatechin-(4##8)-catechin’. In Figure 5A, the molecule are composed of 2 catechins. In Figure 5C, one of epicatechins in procyanidin B2 has a missing 3-OH group, which should be backword.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.