Reviewer's report

Title: Neuroprotective effects of Liriope platyphylla extract against hydrogen peroxide-induced cytotoxicity in human neuroblastoma SH-SY5Y cells

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Reviewer: Lin Li

Reviewer's report:

In this paper Park et al investigated the effects of Liriope platyphylla extract (LPE) on H2O2-induced cytotoxicity in SH-SY5Y cells. They reported that LPE pretreatment attenuated apoptotic cell death, intracellular oxidative stress and mitochondrial dysfunction induced by H2O2. In addition they found that p38 activation was involved in the neuroprotective effects of LPE. In general, the experiments are well conducted and the manuscript is well organized. Here are suggestions to further improve the manuscript before being accepted for publication. This manuscript needs minor essential revisions.

1. Figure 3 and Figure 5A only show the representative images. It is suggested to add the quantitative figures with statistical analysis.

2. There are some minor errors:
   (1) Page 8 line 12: “(Santa Cruz Biotechnology))”
   (2) Page 12 line 13: “while LPE pretreatment” lacks the concentration of LEP. Figure 1B shows that only 50 ug/ml LEP significantly increased the cell viability.
   (3) Page 13 line 5: “however, LPE pretreatment” is short of the concentrations of LEP.
   (4) Page 14 line 15: “early apoptosis (Annexin-V/PI, lower left quadrant)”
   (5) Page 17 line 13: “the phosphatidylinositol 3-kinase (PI3K/Akt)”
   (6) Page 18 line 11: “RA” lacks its full name.
   (7) Page 23-26: Reference 3 and 4 lack stopping page, Ref. 8 is short of pages, Ref. 32 and 33 have not used the abbreviation of journal’s name.
   (8) Page 29-31: Please carefully check the punctuation marks in Figure Legends.

Level of interest: An article of importance in its field

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.