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.

**Version:** 1  **Date:** 3 February 2014

**Reviewer:** Shu Juan Yu

**Reviewer's report:**

Authors did an interesting work. It is necessary to detail the antioxidant mechanism of natural products. The statistic analysis in this manuscript is good, and the data are credible. Therefore, I recommend publication, although I have a suggestion.

It is necessary to compare the difference between ORAC and other antioxidant means such as DPPH, reducing power, etc. in you research system. Many references have detailed the importance of using different antioxidant means in vitro for example “Yongguang Guan, Benshan Zhang, Shujuan Yu, et al., Effects of Ultrasound on a Glycin–Glucose Model System—A Means of Promoting Maillard Reaction, Food and Bioprocess Technology, 2011, 4: 1391-1398” and “Yongguang Guan, Qiang Tang, Xiong Fu, et al., Preparation of antioxidants from sugarcane molasses. Food Chemistry, 2004, 152: 552-557” used different antioxidant methods, which might provide some useful information for your research especially in INTRODUCTION part.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.