Reviewer's report

Title: Induction of cell cycle arrest and apoptosis in MCF-7 cells by Dillenia suffruticosa root extract via reactive oxygen species formation and multiple signaling pathways

Version: 2 Date: 24 January 2014

Reviewer: Jong Bin Kim

Reviewer's report:

Major Compulsory Revisions
Authors observed anti-cancer effect of Dillenia suffruticosa root extract on breast cancer cells.

Authors reported same results for figure 1, 2, 3, and 4 on their previous reports (Journal of Ethnopharmacology 146 (2013) 525–535, Molecules 2013, 18, 13320-13339). On the manuscript, authors showed reactive oxygen species level and related molecules after Dillenia suffruticosa root extract treatment unlike their previous reports. This is interesting and novel effect of Dillenia suffruticosa root extract on breast cancer. However, these results need to be confirmed by experiment at least more than three times. If the results are significant statically after several trials, the manuscript should be revised to publish by focusing on the cell death and related molecules by reactive oxygen species stress.

Minor Revisions
1. For figure 3, 4, 5, 6, and 7, independent experiments should be performed more than three times to confirm statistical difference.

2. Figure 5 was not significant statically. Cell death by Dillenia suffruticosa root extract treatment did not block by anti-oxidant agents on breast cancer cells. These results showed that cell death by Dillenia suffruticosa root extract did not result from reactive oxygen species stress.

3. Figure 6 and 7 showed related signaling molecules after Dillenia suffruticosa root extract treatment. To observe signaling pathway after drug treatment, it should not be measured by gene level, but protein level.

4. Figure 6 and 7 should be combined.

5. Figure 8 is not correct.

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Acceptable

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

Declaration of competing interests:
'I declare that I have no competing interests'