Reviewer's report

Title: Phytochemical Constituents and Medicinal Properties of Different Extracts of Strobilanthes crispus (L.) Bremek Grown in Different Locations of Malaysia

Version: 2
Date: 21 June 2015

Reviewer: Jaures K Noumedem

Reviewer's report:

- Major Compulsory Revisions (which the author must respond to before a decision on publication can be reached)
  1- The whole manuscript has to be edited as there are numerous typos.
  2- The authors should make a better search for the existing information. Few omissions include:
     Line 97-98 The authors claim that: ‘extraction or high-performance liquid chromatography (HPLC) analysis techniques have not previously been developed for this material’. They should check for the thesis entitled pharmacological evaluation of Strobilanthes crispus (l.) blume written by CHIN LEE CHENG since 2008. They should also consider the findings of this thesis as far as the anticancer activity of Strobilanthes crispus leaf extract is concerned.
     Consider also the study: Strobilanthes crispus Extract Induces Apoptosis through Enhanced Caspases Activities in Cervical Cancer Cells. Yen Hoong Chong et al. This study should be consider also in the discussion section.

- Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

  Title:
  3- give precision on the fact that extracts are from leaves

  Abstract:
  4-Line 43 and 44: change ‘various solvents (aqueous and ethanol)’ into aqueous and ethanol extracts
  5-Line 45: change ‘Aqueous extracts’ into Aqueous extract
  6-Line 46: ‘TPC (12.62 mg/g DM)’ : give the signification of ‘DM’ as it is the first time it appears in the manuscript
  7-Line 50: change ‘were phenolic acids:’ into were phenolic acids classified as followed:
  8- Keywords: why do the authors separate some keywords using comma (,) and the others using semi colon (;) ?
  9- Delete “UHPLC” since the authors are not studying the methods

Introduction:
10- At least a general statement should be said about cancer and oxydation or antioxydants as well as the relationship between cancer and oxydation.

Methods
11- 1,1-diphenyl-2-picrylhydrazyl (dpph) assay: give precision on the calculation of IC50
12- Line 170: ‘Leaf extract (100 µL) and deionized’: create a space between ‘(100 µL)’ and ‘and’
13- Line 171: Change ‘ ’ into 37 °C.
14- Line 187-188: Change ‘The concentration of extracts used ranged between 20, 40, 80, 160, 320, and 640 µg/mL’ into the following concentrations of extracts were used: 20, 40, 80, 160, 320, and 640 µg/mL.
15- Line 190: ‘. Each point represents the mean of triplicate experiments’ put this sentence at the end of the paragraph. Before this sentence, the authors should mention the graph that was plotted

Results and discussion:
16- Line 199: ‘concentrations of TPC and the values were also dependent on the solvent’: values of what?
17- Line 210: is it ‘TPC’ or TFC?
18- Line 241: Change ‘potent free radical inhibition’ into better free radical inhibition
19- Line 242: Change ‘Thus, the results indicated that aqueous extracts have superior antioxidant activity’ into Thus, the results indicated that aqueous extracts have higher antioxidant activity
20- Line 247-249: ‘Qader et al. [7] reported that aqueous extracts of S. crispus leaves (1mg/mL) showed antioxidant activity with Fe2+ reducing ability (1182 mM/g) compared to gallic acid (1216.67 mmol/g) using the FRAP assay’. Do the authors mean a better antioxidant activity??
21- Line 309: give the signification of IC50 as far as anticancer activity is concerned
22- Line 334-335: Delete ‘if the three different sampling locations from northeast (Kelantan) to north-west (Penang) are compared’
23- Line 337: Delete ‘One of the significant findings of this study is that’

Titles of the tables:
24- Remove ‘Bars represent standard error of the means’ and put in under the tables.
25- Table 2: why the authors did not consider statitical analysis for IC50?
They should also include BHT and a-tocopherol when considering statistic analysis

Conclusion:
26- The authors should be more concisely and more specific

Authors’ contributions

27- Change ‘A.Rahmat was participated’ into ‘A. Rahmat participated’

- Discretionary Revisions (which are recommendations for improvement but which the author can choose to ignore)

28- Many abbreviations are used in the manuscript, it is better to include a list of abbreviations before competing interests and authors’ contributions.

29- The chemical composition study is focused on phenolic acids, saponins and flavonoids: the authors should explain why they focus the chemical composition study only on these components

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

Quality of written English: Needs some language corrections before being published

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