Author's response to reviews

Title: Assessment of phytochemicals, antioxidant, anti-lipid peroxidation and anti-hemolytic activity of extract and various fractions of Maytenus royleanus leaves

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Author's response to reviews:

Dear Editor

We have revised the manuscript according to the suggestion of the reviewers.

With best regards

Dr MR khan

Reviewer's report 1

Title: Assessment of phytochemicals, antioxidant, anti-lipid peroxidation and anti-hemolytic activity of extract and various fractions of Maytenus royleanus leaves

Version: 2 Date: 11 February 2013

Reviewer: Ilhami Gulcin

Reviewer's report:

In the present study, authors investigated phytochemicals, antioxidant, anti-lipid peroxidation and anti-hemolytic activity of extract and various fractions of Maytenus royleanus leaves. However, it needs some amended corrections. After those corrections it can be accepted as regular manuscript. These corrections were listed below.

In Abstract:
1. Lines 5-8: “Methods and Materials: Various parameters including scavenging of free-radicals (DPPH, ABTS, hydroxyl and hydrogen peroxide), reducing capacity (superoxide radical, total antioxidant capacity, Fe3+ to Fe2+), anti-lipid peroxidation and anti-hemolytic activity were investigated.” should be corrected as “Methods and Materials: Various parameters including scavenging of free-radicals (DPPH, ABTS, hydroxyl and superoxide radical), hydrogen peroxide..."
scavenging, Fe3+ to Fe2+ reducing capacity, total antioxidant capacity, anti-lipid peroxidation and anti-haemolytic activity were investigated.”. Corrected

In Background:
2. Lines 2-5: After the information of “Nowadays, plants …induced diseases [1]” the following actual references should be given: “Antioxidant activity of food constituents-An overview. Archives of Toxicology, (2012), 86 (3), 345-396” and “Phenolic compounds as antioxidants: Carbonic anhydrase isoenzymes inhibitors. Mini Reviews in Medicinal Chemistry, (2013), 13(3), 408-430”.
3. Line 19: After the information of “..majority of the population in developing countries use traditional medicines [11]” the following both reference should be given: “Antioxidant activity and polyphenol content of cherry stem (Cerasus avium L.) determined by LC-MS/MS. Food Research International, (2013), 51(1), 66-74” and “Pomological features, nutritional quality, polyphenol content analysis and antioxidant properties of domesticated and three wild ecotype forms of raspberries (Rubus idaeus L.). Journal of Food Science, (2011), 76(4), C585-C593”.
4. Line 19: At the same manner after the sentence of “Recent studies are focusing on replacement of synthetic antioxidants with naturally occurring compounds that are active antioxidants to avoid the potential toxicity of synthetic ones [13]”, the references of “Antioxidant, antimicrobial, antiulcer and analgesic activities of nettle (Urtica dioica L.). Journal of Ethnopharmacology, (2004), 90, 205-215” and “Antioxidant, antimicrobial, antifungal and antiradical activities of Cyclotrichium niveum (Boiss.) Manden and Scheng. International Journal of Food Properties, (2008). 11(2), 450-471” should be cited. All these references are cited
5. Page 8 Line 8: After the “IC50 is the concentration value, which scavenged 50% of the DPPH radicals. Ascorbic acid and rutin were used as reference compounds.” the following both reference should be given: “Antioxidant properties of resveratrol: A structure-activity insight. Innovative Food Science and Emerging Technologies, (2010), 11, 210-218” and “Antioxidant activity of L-Adrenaline: An activity-structure insight. Chemico-Biological Interaction, 179(2-3), 71-80”. References are cited
6. Page 10 Line 6: After the “Hydrogen peroxide scavenging activity (%) = (1-absorbance of sample/absorbance of control)×100.” the following both reference should be given: “Metal chelating and hydrogen peroxide scavenging effects of melatonin. Journal of Pineal Research (2003), 34, 278-281.” and

7. In Table 5: “Reducing power absorbance at 700 nm (250 µ g/ml)” should be corrected as “Reducing power (700 nm, 250 µg/ml)” corrected

8. In Table 5: Concentration unit was given in former line. Because of “10 µg/ml 50 µg/ml 100 µg/ml 200 µg/ml 250 µg/ml” should be corrected as “10, 50, 100, 200, 250”. Corrected

Level of interest: An article of outstanding merit and interest 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

Reviewer’s report 2

Title: Assessment of phytochemicals, antioxidant, anti-lipid peroxidation and anti-hemolytic activity of extract and various fractions of Maytenus royleanus leaves

Version: 2 Date: 18 February 2013

Reviewer: Ramkumar Kunka Mohanram

Reviewer’s report:
This manuscript describes the antioxidant, and anti-hemolytic effect of various fractions of Maytenus royleanus leaves. Main reservations on the quality of the publication of Shabbir et al, concern the adopted methodology especially chemical in vitro assays with no direct connection to traditional uses and lack of positive controls. Nowadays, the evaluation of new natural antioxidants is considered as a very hot area of research, where simple screenings of plant extracts, without identification of molecular targets and mechanisms of action, are weak contributions.

Major Compulsory Revisions

1. Among the wide array of medicinal plants listed and its reported antioxidant potential, what is the novelty of the present study?

Firstly diverse techniques are utilized and secondly semi in vivo studies like lipid peroxidation and anti-hemolytic activities were carried out that were more acceptable as compared to only the in vitro studies.
2. What is the rationale for choosing successive extraction procedure for this study?
Ascending polarity based fractionation was performed to maximize the concentration of diverse chemicals into a specific fraction.
3. The authors should clarify whether the extraction of phenolics or flavonoids were employed to screen the antioxidant potential. If so, provide details in the methods section.
Purely phenolic and flavonoid based antioxidant activity was not carried out.
4. In the Statistical analysis section, page 12, the authors have given that the experiments were performed in triplicates. The question is whether the authors performed multiple corrections for the values observed? If yes, please mention in the results section. No
5. The authors have not included the standard deviation in the graphs? SD is now provided
6. The authors have not presented the chemical constituents of the leaf extract in the present study? LC-MS chromatogram is provided for the methanol extract.
7. The authors conclude that methanol, ethyl acetate and n-butanol fraction shows higher therapeutic potential than other others. This conclusion should be further documented with additional evidences? corrected
8. The reference section of this manuscript should be updated
New references are included
9. The GC-MS analysis of the extract should be included for further strengthening of this manuscript. LC-MS chromatogram is provided.
Minor Essential Revisions
10. The Materials and methods section should be expanded. For eg: Details regarding the instruments or the reagents used for the study should be mentioned? Details are provided
11. The authors should carefully edit the entire manuscript for grammatical as well as typographical errors? Edited for grammatical and language
Level of interest: An article of limited interest
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.