Reviewer's report

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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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.”.

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, antulcer and analgesic activities of nettle (Urtica dioica L.). Journal of Ethnopharmacology, (2004), 90,”.

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 “(2009). Antioxidant activity of L-Adrenaline: An activity-structure insight. Chemico-Biological Interaction, 179(2-3), 71-80”.


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

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”.

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