

# Review of: "Phytochemical Analysis and Antioxidant Activity of Extracts from *Berchemia zeyheri* — A Swazi Medicinal Plant"

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Potential competing interests: No potential competing interests to declare.

Dear editor and dear authors,

Here is my review for the submitted manuscript.

In the Introduction part, the plant of interest, *Bechremia zeyheri*, is thoroughly described, as well as the classes of phytochemicals reported as present in different parts of this plant. As the authors reported, this plant showed many biological and pharmacological activities, so that explains the need for its further investigations and analyses. The authors also represented how the literature preview does not offer phytochemical analyses and radical scavenging potential of *B. zeyheri*, especially from the species collected in the Kingdom of Eswatini.

However, here are some minor suggestions:

1) In the sentence "Various classes of phytochemicals have been reported from various parts of *B. zeyheri*, which include alkaloids, flavonoids, glycosides, polyphenols, and steroids classes of compounds (Bekker et al., 2001; Blunden et al., 2004; Blunden et al., 2006; Amusan et al., 2007; Mkhize et al., 2018)," a space is missing.

2) Maybe it would be useful to add an explanation of why the radical scavenging potential is important.

The Materials and Methods are detally explained, so I do not have any suggestions except the space missing in the sentence: "The qualitative phytochemical analysis on various extracts obtained from the leaves and stem-bark of *B. zeyheri* were performed as per methods previously described in the literature (Pillai et al., 2021) and the references therein."

For the Results and Discussion part, also the space is missing in the sentence: "The following ten extracts (E1-E10) were prepared from the leaves and stem-bark of *B. zeyheri*."

The sentence: "In general, the distribution of various phytochemicals in **leaves** has been responsible for regulation of growth and development, nutrient storage activity, and biological activities (Kumar et al., 2023), while the distribution of various phytochemicals in **leaves** has been responsible for protective functions against herbivores and pathogens (Kumar et al., 2023)," is a bit confusing since both parts of the sentence are mentioning the leaves but with different activities.

The space is missing in the following sentences:

1. The tannins present in *B. zeyheri* have been responsible for this anthelmintic activity since tannins have the ability to damage the protective outer layer of worms and interfere with nutrient absorption (McGaw et al., 2007).
2. The results of DPPH free radical scavenging potential of these ten extracts (E1-E10) and the positive control, ascorbic acid, are summarized in Table 2.

In the conclusion part, the authors once again summarized their contribution, and in my opinion, the article is short but interesting and worth publishing. However, as the authors pointed out, a really interesting update of this article would be further studies on the therapeutic applications.

Best regards,