Reviewer's report

Title: Topical Green Propolis Improves Corneal Wound Healing and Inflammation in Rats following Alkaline Burns

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Reviewer: Andresa Berretta

Reviewer's report:

Major Revisions are required.

The manuscript of Martin et al. presented like the aim of evaluate the antiinflammatory and healing actions of a green propolis microemulsion in alkaline injuries in eyes.

Some points needs to be clarified, especially considering to propolis source, extraction and pharmaceutical preparation, for example:

1. The authors inform that Green propolis used in the work was obtained from Barra do Corda, MA, Brazil. However, green propolis is a very specific type of Brazilian propolis and is associated with southern and part of south region of this country, especially Minas Gerais and São Paulo States, besides this propolis is characterized for presenting Artepillin C like an important biomarker from source. Considering that green propolis has been extensively studied nowadays, and the source mentioned in the present manuscript looks like strange, is mandatory that the authors present chromatographic fingerprint of the propolis used in order to confirm the denomination used in the work, if this chemical characterization was not possible, I can strongly suggest that the authors change the denomination used for propolis in this manuscript because, until now, scientific literature do not presented demonstration of green propolis in Northeast region of Brazil;

2. The authors are using propolis produced by Scaptotrigona sp., one type of propolis very little studied. However, the introduction and discussion does not mention the reasons for this choice, and more impressive is to compare the results with other types of propolis, especially the concentration with red propolis, a completely different type of propolis. Then, I suggest that the discussion of the results involves propolis from Scaptotrigona sp., or, if not available because the limited number of studies with this specific type of propolis, use results obtained with brown or green propolis, that represents more properly the general chemical composition of propolis, and not red propolis;

3. Was microemulsion prepared with raw propolis crushed or some extract of raw propolis was used ? In this last case, what kind of extractor solvent was used, process, temperature, etc.. ? Could microemulsion preparation be better explained ?

4. The authors inform that control group was treated with vehicle, can the authors clarify what vehicle involves ?
5. The quality of the work can be improved if a group treated with a conventional medicine is introduced, like a group treated with a corticosteroid, for example.

6. Because some strange word can be found in the text, the revision of the language is indicated, for example: “principally”, “a resinous product consisting of sap, bark and be excreta”, etc.

The work is important to propolis field and can contribute to the knowledge in this area.

**Level of interest:** An article of importance in its field

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

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests' below