Reviewer's report

Title: Brazilian green propolis modulates inflammation, angiogenesis and fibrogenesis in intraperitoneal implant in mice

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Reviewer: Pompeo Bolfa

Reviewer's report:

Propolis has a long history of use in medicine due to its broad spectrum of activities. Although widely studied over the last years, little is known about the pathways that propolis is modulating in healing processes. That is exactly what Lima et al. aimed in the current work, using an animal model of peritoneal injury.

Although the study presents some new and interesting data, there are some revisions that would contribute to improving the material:

Major Compulsory Revisions

The materials and methods part is too detailed (maximum 1500 words from the current 2000)

Statistical analysis: Did the authors perform some normality test and some test for the homogeneity of variances?

Results: The authors mention to have monitored the animals for toxic effects. Generally an acute toxicity study is 14 days. Did the authors monitor some animals for that period and at the end of it evaluate the possible toxic effects of the tested extract?

Please rewrite this part “The intraperitoneal implants were infiltrated by fibrovascular stroma occupying the entire sponge by day 5. The tissue was composed of a dense inflammatory infiltrate with various cell types such as leukocytes, mesotheliallike cells and microvessels (Fig. 1C). In propolis-treated group, vascularization and inflammatory cell infiltrated were decreased (Fig. 1D).” The dense inflammatory infiltrate is not visible in the image you provided. Please insert an image to prove that or remove “dense” from the text. What type of leukocytes? There is a lot of red blood cells free in the histological images. How do you explain them? As there is no hemosiderin it is most likely that they are artefactual. How did the authors quantify the decrease of inflammatory cells? Is it just estimation? Please be more precise!

Please use the exact data when you are referring to increase of cytokine. Avoid “about….%”

Figure 2: What does # sign represent?

When exactly was the evaluation done? You mention both 4 days and 5 days in
the text.

Minor Essential Revisions

How many sponges were implanted in each animal?

Histopathology part should be detailed (1-2 phrases to add)

Missing word: "The extent of neutrophil accumulation in the implants was measured by assaying myeloperoxidase (MPO) activity as previously........... [9-10]."

“Although the increase in both pathways was observed the classical activated macrophages was much higher 23 fold for NOS2 and 7 fold for IFN-than that of the alternative pathway.” Actually, it is here in the results section that you should present the data (fold) for the alternative pathway as well (8 fold and 2 fold) so actually the increase in FIZZ1 expression is higher than IFN.

Level of interest: An article of importance 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