Reviewer's report

Title: In vitro anticoagulant and antioxidant activities of Jatropha gossypiifolia L. (Euphorbiaceae) leaves aiming therapeutical applications

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Reviewer: Fernanda CV Portaro

Reviewer's report:

Minor Essential Revisions

1- This manuscript reports the evaluation of the anticoagulant and antioxidant activities of J. gossypiifolia leaves, looking for new therapeutic uses for this plant. I enjoyed reading this analysis of the effects exerted by Jatropha gossypiifolia L. (Euphorbiaceae) leaves. The biochemical experiments were performed competently, but I believe that there are still many aspects that should be studied, now or in the future. This is understandable, as the MS does not deal with purified compounds, but with the semi-purified fractions. The main aspect is about the possible presence of peptides in CE and RA fractions, which was not addressed. The contents of sugars, proteins and phenolic compounds were measured, but the peptide content was overlooked. The Bradford method is not suitable for measuring peptide dosages. The use of fluorescamine may be useful for the measurement and detection of peptides. Also, on page 18, the test performed with ninhydrin indicated the presence of primary amines in the fraction called RA, but, again, were correlated only to proteins (and not to peptides). Several papers in the literature indicate the presence of protease inhibitors in plant extracts and could be cited as examples. Thus, it would be of utmost importance that the authors mention, in the discussion, the possible presence of protease inhibitor peptides in both CE and RA fractions.

2- Do the authors know if the plant extract is able to inhibit the effects of the venom of B. jararaca? This venom, certainly, contains thrombin-like serine protease (which can be inhibited by the extract, inducing the anticoagulant action) and hemorrhagic metalloproteinases (which can be inhibited by compound(s) with chelating action presented by the extract (RA and CE) when the study of the antioxidant action). The authors can eliminate the presence of a protease with direct action on fibrinogen, but not a peptide inhibitor of serino- and metalloproteases. If the authors have more information about this, I think it would also be important to include them in the discussion of the MS.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.
Declaration of competing interests:

I declare that I have no competing interests