Reviewer's report

Title: Bauhinia forficata: absence of toxicity during long-term treatment of experimental diabetes

Version: 1 Date: 15 February 2004

Reviewer: Glaucê Socorro de Barros Viana

Reviewer's report:

General

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Analysis of the manuscript entitled: "Bauhinia forficata: absence of toxicity during long-term treatment of experimental diabetes" by Pepato et al.

The work deals with the study of the toxicity of Bauhinia forficata decoction orally taken for one-month by streptozotocin-induced diabetic rats. The toxicity was assessed by the serum levels measurements of enzymes, such as lactate dehydrogenase (LD), creatine kinase (CK), amylase (AMS) and angiotensin-converting enzyme (ACE), as well as bilirubin. Measurements were performed twice, i.e., on the 19th and 33rd days of treatment, in both the controls (DC) and B. forficata treated group (DT). Although the work is an interesting contribution to the validation of a medicinal plant, several questions should be raised and answered before the manuscript can be accepted for publication. So, after revision, the manuscript can be considered for publication.

Major comments:

1. I would suggest a change in the manuscript title to: "Absence of toxicity after one-month treatment with Bauhinia forficata decoction in streptozotocin-induced diabetic rats". I do not think that one month is a long-term treatment.

2. Abstract (Results and Discussion): according to the data in figure 3, AMS activity was increased and not decreased in both groups (DC and DT) at day 33, as compared to day 0.

3. In the Methods section (Decoction preparation), last 2 lines: it is not clear what is meant by "The final yield was 87% by volume....". How the yield was determined?

4. Animals and their treatment: it should be interesting to list in the References any publication about Brazilian Ethics Committees. Besides, I would like to know whether streptozotocin was really injected into the jugular vein, since usually a penis or tail veins are used for that purpose.

5. Decoction administration, 1st paragraph: what is the purpose for water administration to both groups (DC and DT) on the first six days after STZ injection? The way water or the B. forficata decoction were administered is not clear. How the volume drunken was determined?

6. Decoction administration, 2nd paragraph: It is confuse. How was the blood collected for the measurements of serum enzymes after 19 days of treatment (25 days after STZ injection)? Why at both times (at days 19 and 33), blood was not collected the same way, i.e. through the orbital plexus, as most people do?

7. Results, 2 last paragraphs: besides a significant increase in AMS activity in the DT group, as compared to DC group, I have the feeling that a significant decrease was also shown in the DT group at day 33 in ACE values. Please check the statistics.

8. Table 1, end of footnote: it would be better to say that, "all values are mean ± SD obtained at the 4th day after STZ and before starting Bauhinia forficata treatment". Besides, I do not understand
why figure 1 represents data from LD as well as bilirubin. Perhaps, it would be better if these data were shown in 2 different figures.

9. Discussion, 1st paragraph: It has to be rewritten in order to make it clear. Besides, all the discussion section has to be revised as far as orthographic and grammatical errors are concerned.

10. Discussion, 2 last pages: the discussion on AMS activities in both DC and DT groups has to be improved, since the data show a significant increase in this enzyme activity with time in both groups, as well as a greater increase in AMS activity at day 33 in the DT group, as compared to the DC group at the same period of time.

11. Discussion, last page: I feel that the ACE data deserve to be checked regarding statistics, since it seems that values are significantly decreased in the DT group at day 33.

12. Finally, questions such as those related to AMS and ACE measurements have to be stressed in the Discussion section.

13. All the text including References have to be revised, concerning English language errors.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

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Discretionary Revisions (which the author can choose to ignore)

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of importance in its field

Quality of written English: Not suitable for publication unless extensively edited

Statistical review: No

Declaration of competing interests: None