Reviewer's report

Title: Medicinal potential of Vellozia flavicans Mart. ex Schult.: an inhibitor of the neuromuscular blockade-induced by Bothrops jararacussu venom

Version: 1 Date: 10 June 2013

Reviewer: Stella R Zamuner

Reviewer's report:

Comments to the Author

Major Compulsory Revisions

The paper is interesting but numerous points should be addressed before its consideration for publication.

General:

- The English is generally poor. The manuscript design is confusing. There is a general discontinuity in the text.

- This study intends to provide information on the effect of Vellozia flavicans plant extract in neuromuscular blockade caused by B. jararacussu venom and antimicrobial activity of this plant. It is not clear the connection between neuromuscular and microbicidal activities of the plant, since the neuromuscular effect is systemic and microbicidal activity is a local effect. It should be explained.

- The authors intend to investigate whether the V. flavicans plant has anti-snake properties (or antophidian potential), however only one effect caused by the venom was investigated, the neuromuscular blockade, effect which is not characteristic of bothropic snake venom, but characteristic of crotalic snake venom. The anti-snake properties should be corrected by anti-neuromuscular effect or clarified further by the authors.

Specific comments:

In the abstract session:

- The authors mention the profile of the chromatography of plant extract. What is the reason to do the chromatography if in the entirely study the authors used the total extract and the concentration of each component of the plant is not known? This point should be clarified.

- Line 4 “Vellozia flavicans has been….”, should be replaced by “Vellozia flavicans plant has been….”.

In the Introduction session:

- would be interesting to describe a little more the neuromuscular blockade caused by bothrops snake venom and the importance of it for the bothropic accident.

In the Results and discussion session:
Page 7 – 3 paragraph: “These results suggest the beneficial effects of higher concentration of V. flavicans at skeletal apparatus, but the basal response decrease at lower concentration may suggest a parallel regulation on skeletal excitability since other endogenous signaling pathways are capable of compensating the cholinergic control of movement, as glutamate.”

This paragraph is not clear. Explain why glutamate could regulate the cholinergic control of movement when lower doses of V. flavicans caused a basal line decline or other pathway that could be interfering in this effect.

**Level of interest:** An article of limited interest

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

**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'