Reviewer's report

Title: Investigation of Neuropharmacological activity of Kaempferia galanga in Swiss albino mice

Version: 1 Date: 6 November 2014

Reviewer: FRANCISCA CLÉA C FLORENÇO DE SOUSA

Reviewer's report:

Discretionary Revisions

The title should highlight the sedative activity K. galanga, since experimental models suggest this. Using the term "neuropharmacological activity" becomes very broad and not specifically translates what is presented in the study. I suggest replacing "Investigation of neuropharmacological activity ..." to "... study the sedative activity; it would value more work.

I suggest indicate in the topic “Drugs and treatment”, how the fractions of the extract were reconstituted after the extraction process and solvent evaporation. Chloroform and methanol CNS depressant and could affect the results.

Minor Essential

I suggest put the topic on the experimental animals, the number of protocol approval by the Ethics Committee for the use of laboratory animals for the experiments.

The correct dose of diazepam was not 2mg / kg, ip? The dose of 1mg / kg, i.p. is commonly used by researchers to assess anxiolytic and sedative activity not.

Major Compulsory Revisions

It would be important to better exploit the authors discussion, compared to the results obtained. The discussion is being conducted for a sedative or anxiolytic activity of fractions of K. galanga?

The reduction in sleep latency and increased total sleep time are classic parameters to relate the action of CNS depressants (Dandiya et al., 1959). Thus, considering that the fractions exerted its effects by decreasing sleep latency, increased total sleep duration by decreasing locomotion in the Open field and Hole cross test, the results indicate a sedative activity of K. galanga and not anxiolytic. Maybe not so much necessary to explore the neurophysiological aspects of the GABA receptor in the discussion; since the experimental results and the models do not provide much support for it.

It would be important because the authors describe not perform any testing to confirm that the activity of fractions of K. galanga is sedative or CNS depressant locomotor activity at the skeletal muscle level. Changes in motor coordination can very often affect the performance of animals in the Open field test and Hole
cross test. Therefore, the effects of fractions of K. galanga should have been studied in the Rota Rod test, a classic animal model for evaluating peripheral neuromuscular activity (Amaral et al, 2007; ADZU et al., 2002). Indicate the completion of a possible sedative effect of fractions K. galanga but that larger studies are needed to confirm these effects.

Level of interest: An article of importance in its field

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.