Reviewer's report

Title: Screening of anti-dengue activity in methanolic extracts of medicinal plants

Version: 1 Date: 1 August 2011

Reviewer: Alaide Oliveira

Reviewer's report:

1. Is the question posed by the authors well defined?
Yes, questions related to dengue, such as the two forms of the disease, the vector of the dengue virus, its serotypes, population at risk pointing out to the marked increase in the number of cases in South America as well as the urgent need need to develop a vaccine and medicines have been well addressed.

2. Are the methods appropriate and well described?
Yes, the article deals with the evaluation of the anti-dengue activity of plant extracts and the methodologies related to the phytochemical and virology aspects have been properly described. The standardization of extracts was carried out by the by colorimetric quantification of flavonoids in the presence of AlCl3. Cytotoxicity to vero cells was evaluated by the colorimetric MTT assay. The antiviral assay was based on the CPE inhibition effects of the extracts against DENV-1-infected vero cells and the effects were observed under inverted microscope.

3. Are the data sound?
All the methodologies used are appropriate and, therefore, the data sound reliable.

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?
Yes.

5. Are the discussion and conclusions well balanced and adequately supported by the data?
Yes, although it was not observed a correlation between antiviral activity and the contents of flavonoids in the extracts, as emphasized in the introduction. With reference to the Conclusions described in the Abstract, the first phrase is not coherent with the results. As it is, it seems that the authors are possibly referring to an expectation in relation to a therapeutic application of the active plant extracts. It is the opinion of this referee that it should be changed to: “The methanol extracts of A. paniculata and M. charantia possess the ability of inhibiting the activity of DENV-1 in vitro assays”.

6. Are limitations of the work clearly stated?
No limitation was mentioned.
7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
No, there is no acknowledge to this kind of work.

8. Do the title and abstract accurately convey what has been found?
Yes.

9. Is the writing acceptable?
Yes, though I believe it may probably be improved by an English Text Reviewer.

Major Compulsory Revisions
1- All the latin names of the 5 plant species that have been studied should be complete, including the family name in parenthesis, when they are firstly mentioned in the manuscript at p.4.
Example:Cymbopogon citratus must be changed to Cymbopogon citratus (DC.) Stapf (Poaceae).
For information on the other plant species see: http://www.theplantlist.org/

2- Reference no. 26 is frequently found in the scientific literature as:
I wonder it is the same listed in the manuscript and must then be changed.

3-Reference no. 13 is of 1966, besides being limited just to the antiviral activity of a flavonoid (quercetin). There are several review papers in the scientific literature and it must be changed to an up-to-date reference.
I have not seen any signs of duplication or plagiarism.
There are several scientific publications on the plant species investigated but, as far as I am concerned, this is the first report on the anti-DENGUE activity of their extracts.

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