Reviewer’s report

Title: In vitro antifungal activity and cytotoxicity effects of fresh xylem sap of Hymenaea courbaril L. and its major constituent fisetin

Version: 2 Date: 10 February 2014

Reviewer: Paulo M Imamura

Reviewer’s report:

The article complements existing data in the literature regarding the biological activities of Hymenaea courbaril (jatoba), widely used in folk medicine by the natives of the Amazon region.

Carefully reading the manuscript, we can see that the article needs a good overhaul and needs to improve writing as well as the discussion of the results. A large number of observations is indicated in the text attachment. Apart from that there other relevant issues that should be clarified as:

• In methods and structural elucidation, it was not clear whether compounds 2-5 were separated.

• In the HPLC chromatogram (figure 2), the figure a corresponds to fisetin and figure b correspond to the crude sap. Is this would sap fresh or filtered? In this figure b, the second peak corresponds to fisetin and it is assumed that the first peak corresponds to the mixture of compounds 2-5. Was not possible to separate these compounds by column chromatography on silica? (see the item method, p.3)

• It was also not clear which sap was used to perform the susceptibility testing, i.e. if fresh sap (crude) or filtered? What was done with the lyophilized filtrate containing compounds 2-5?

• It was also not clear how the identification of compounds by NMR was taken. Were the 1H and 13C NMR spectra obtained from the isolated compounds (pure) or with the sample containing a mixture of compounds?

Level of interest: An article of importance in its field

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

Statistical review: No, the manuscript does not need to be seen by a statistician.