Reviewer's report

Title: In vitro anti-Onchocerca ochengi activities of extracts and chromatographic fractions of Craterispermum laurinum and Morinda lucida

Version: 2 Date: 13 March 2014

Reviewer: Dieudonne NDJONKA

Reviewer's report:

Reviewer Comments
Abstract
Methods:
120 hours better 05 days

Background
Page 2, last sentence
O. ochengi should be Onchocerca ochengi

Methods
Isolation and culture of O. ochengi adult worms (microfilariae)
It is not easy to isolate the female worms. How did authors isolate these female without the use of collagenase?

Preparation of mammalian cells for microfilarial cultures and cytotoxicity assay
Page 5, line 2
Which “culture medium”? In page 4, lines 2 of this paragraph, the authors say that the culture was proliferate in complete culture media.

Primary screen for adult worm and microfilariae
It is not correct to use compound BTU55261 as positive control since results are not published. Why not use ivermectin or levamisol for both adult worms and mfs? Also 2% DMSO final concentration are a lot. Authors should see recommendations of WHO on the concentration of DMSO used. This concentration should not be more than 1%.

Page 6, line 1. Authors should describe in detail how they performed test with MTT/formazan colorimetric. A picture of this test in result should be also better.

Page 6, line 2, check reference 31.

Results
Activity of crude extracts of both plants on adult worm and microfilariae
Table 1: Replace “% Inhibition of formazan formation” by “% Inhibition of adult
motility”.
This table can be divided into two parts. The first part as curve including concentrations from 0 to 500µg/mL plus CL and ML. The second part as table with IC50, CC50 and SI.
Where are the positive and negative controls?

Activity of chromatographic fractions of C. laurinum on microfilariae and adult worms
Table 2 is not necessary. Authors can combine table 2 and 3.
A curve can better explain table 3.
Table 3: S/N 6, Fraction F: at 62.5µg/mL: 62.5% inhibition. At 31.25µg/mL: 75% inhibition How authors can explain this result?
Page 8, line 4
Figure 2 does not explain very well this part of the result. It would be better to show this part of the result as a curve. Also show the different values of IC50 on the top of each graph.
Page 8, line 8,
“Fraction E inhibited motility and formazan formation in the male and adult worm……”. I think it is “Fraction E inhibited motility and formazan formation in the adult male and female worm……”.

Activity of chromatographic fractions from the methanol extract of ……
This paragraph is not well explained and leads to confusion. Authors should think about a best way to show this result on an appropriate graph. Also show the different values of IC50 on the top of each graph

Cytotoxicity and acute toxicity of active extracts
Figure 2 and 3 do not show CC50s.

Discussion
Page 9, line 12 of the discussion:
Replace Trypanosoma brucei brucie by Trypanosoma brucei brucei
All references are not correct.
Example: [1, 24, 25, 26 and 36] should be [25, 26, 27, 28 and 37]
[21] should be [22]
[22] should be [23]
[23] should be [24]
[37] should be [38]
[38] should be [39]
Also in discussion authors should mentioned recent studies on Onchocerca ochengi with plants. There are many recent publications on O. ochengi with
Anogeissus leiocarpus, and polyphenols from that plant.

Page 10, line 26
Replace “fourteen” by “fourteen”

References
All scientific names should be written in italic
Some volumes of the article are written in bold. Example: number 30.
Some journals are in italic.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

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