Reviewer’s report

Title: Some Strychnos spinosa (Loganiaceae) leaf extracts and fractions have excellent antimicrobial activities and low cytotoxicities.

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Reviewer: Jean de Dieu TAMOKOU

Reviewer’s report:

Title: Some Strychnos spinosa (Loganiaceae) leaf extracts and fractions have excellent antimicrobial activities and low cytotoxicities.

Major essential revisions are required before this manuscript could be considered for publication.

The manuscript by Isa et al describes the preliminary data on the antioxidant, antimicrobial and cytotoxicity effects of Strychnos spinosa extracts. The data adds new information of the regional importance. The authors are suggested to revise and resubmit the manuscript. Specific suggestions are as follows:

Line 107: Extraction and liquid-liquid fractionation section
Can the authors explain how the leaves were dried and powdered?

Line 191: ABTS assay
''2,2'-azino-bis (3-ethylbenzothiazoline-6-sulphonic acid) diammonium salt (ABTS)'' instead of ''2,2-azino-bis (3-ethylbenzothiazoline-6-sulphonic acid) diammonium salt (ABTS)''

Line 205: Cytotoxicity assay
Please revise this section to summarize it.

Lines 269-270: The sentence - “This confirms results found ....” does not read well.

What is the correlation with your work?

Lines 288-290: Antimicrobial results
The MeOH extract from the stem bark of S. spinosa was previously investigated and had no antimicrobial activity against C. albicans, S. aureus, B. cereus and E. coli [9].

How can you explain this according to your results?

In the introduction section (lines 91-93), the authors list a series of classes of phytochemicals which were previously isolated from Strychnos spinosa. Could any of these also explain the present antimicrobial activities?

Line 295: Antioxidant activities
The antioxidant activities of Strychnos spinosa leaves were compared with those of the positive controls. However, to demonstrate its potential applications as drug source, activity of S. spinosa needs to be compared with other plants (if
any) which were reported having antioxidant activity.

Lines 300-303: The sentence-“The highest antioxidant activity mentioned above for some tested…” should be deleted since the authors did not perform phytochemical analysis of the studied plant.

Lines 277-281: “All the fractions had fungistatic effect against C. neoformans while most of the extracts were bactericidal based on the difference in MIC after different time of incubation. Some bacteriostatic effects were observed for acetone and alkaloid extracts against E. coli, and some fractions such as n-butanol against S. aureus, hexane against B. cereus and E. coli, chloroform against E. coli, and ethyl acetate against B. cereus, E. faecalis and E. coli.”

Please provide references to these sentences or methods used to determine the cidal effect of your samples.

Lines 329-331: The authors should be more elaborate about the traditional usage of the plant. They refer to the traditional use of Strychnos spinosa for venereal diseases, leprosy and diarrhea. This information should be explained in terms of their present findings.

Lines 348-423: In the reference section, the authors should check the Reference formatting style of the journal and follow it accordingly.

Pages 19-22

I find the table legends lacking in detailed descriptions. All of them should better describe what the reader is looking at and include sample sizes for replicates, how many independent times analyzed, etc. Similarly, the authors should explain how they compared activities of their samples since statistical analysis is not included in the manuscript.

Please ensure that your tables are correctly formatted in accordance with our formatting guidelines (http://www.biomedcentral.com/bmccomplementalternmed AUTHORS/instructions/researcharticle#preparing-figures).

Specifically, Tables should also have a title (above the table) that summarizes the whole table; it should be no longer than 15 words. Detailed legends may then follow, but they should be concise.

What is the significance of the average values? There is no reference in the text to these values, otherwise there is no point presenting them.

There are some grammatical and typographical errors that should be corrected throughout the manuscript.

Best wishes,
Jean-De-Dieu TAMOKOU, Ph.D

**Level of interest:** An article of importance in its field

**Quality of written English:** Needs some language corrections before being published
Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests