Author's response to reviews

Title: In vitro antimycobacterial activity of nine medicinal plants used by ethnic groups in Sonora, Mexico

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Version: 3 Date: 12 July 2013

Author's response to reviews: see over
Author’s response to reviews

TITLE:

In vitro antimycobacterial activity of nine medicinal plants used by ethnic groups in Sonora, México

AUTHORS:

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Dear Dr. Tom Rowles,

I received the reviewers’ comments (version 2) regarding the manuscript that we sent for publication in BMC Complementary and Alternative Medicine (Manuscript, MS: 1284775545910449, entitled “In vitro antituberculous activity of nine medicinal plants used by ethnic groups in Sonora, Mexico”). We have responded to all comments raised by the reviewers, and we hope that our improved revised manuscript is now suitable for publication in your prestigious journal.

The modified parts of the paper are highlighted in bold-face type and are aimed at clarifying issues raised by the reviewers.

I look forward to your reply and final decision.

Sincerely yours,

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Reviewer's report

Title: In vitro antimycobacterial activity of nine medicinal plants used by ethnic groups in Sonora, Mexico

Version: 2 Date: 30 May 2013
Reviewer: Virgilio Bocanegra-Garcia

Reviewer's report:

Minor Essential revisions

Results and discussion

Comment Reviewer: Anti-proliferative effect in M. tuberculosis cannot be inferred thought the plant effect in placenta expulsion, since this may have more be related to smooth muscle contraction or induced apoptosis. Anti-proliferative mechanisms in eukaryotes are quite different from prokaryotes, so, this explanation in out of line.

Answer: Species of the genus Ambrosia have been previously reported for their anti-tuberculosis activity; furthermore, the inhibitory activity was caused by SQL [Aponte, 2010]. It is likely that anti-tuberculosis activity observed in A. confertiflora and A. ambrosoides is associated with the presence of such molecules. The document was modified with this discussion.

Comment Reviewer: Another possibility of the lack of activity of G. coulteri may be it’s used in combination with other plant infusion in the sick patient, since combination of herb remedies are often used rather than one alone. So scientific confirmation of the biological activity may be biased by the inability of reproduce the actual practical use of the plant or plants, in a given pathological condition.

Answer: The information we have on the use of these species by the ethnic groups of the state of Sonora, Mexico, is limited. In most cases, the use they are given is only mentioned in a general way, without indicating whether it is used in combination with other species or
the specific way of use. In the case of *G. coulteri*, this could not be verified in the conditions evaluated.

**Comment Reviewer:** Authors refer that they used the Baljet test to establish possible presence of SQL and then indicate table 3, but they do not indicate what they find out. The part "…to establish the possible presence of these molecules that resulted positive for all our different extract of…” it is not clear.

**Answer:** The Baljet reaction was used to determine the presence of SQL in all four extracts (chloroform, dichloromethane, ethyl acetate, and methanol) of *A. confertiflora* and the methanol extract of *A. ambrosoides*. Table 3 was modified, and the data about the presence or absence of SQL was included. The document describes in detail the results.

**Comment Reviewer:** The test confirmed the presence of SQL in all the *A. confertiflora* extracts? It did not? It is not clear in the paper. For what you reply to the comment in the cover letter, you find that the SQL are present in all the extracts tested, so please review the writing in the paper about this point.

**Answer:** The Baljet reaction was used to determine the presence of SQL in all four extracts (chloroform, dichloromethane, ethyl acetate, and methanol) of *A. confertiflora* and the methanol extract of *A. ambrosoides*. These results are further described in the paper.

**Comment Reviewer:** Finally I have respectful to insist, that the findings suggest that the infusion method used to extract the active compounds in traditionally medicine is not the best method, since the active compounds at least for this disease (tuberculosis), are less or even non-polar, and this finding is very important and should be clearly stated in discussion or in conclusions.

**Answer:** A further discussion of this issue is set out in the document.