Author's response to reviews

Title: Mycobacterium tuberculosis Complex Drug Resistance Pattern and Identification of Species Causing Tuberculosis in Two Regions of Cameroon

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Version: 3 Date: 25 January 2011

Author's response to reviews: see over
Submission of Revised manuscript 1819865554471402 for BMC Infectious Diseases

We wish to submit the attached revised version of manuscript 1819865554471402, entitled “Mycobacterium tuberculosis Complex Drug Resistance Pattern and Identification of Species Causing Tuberculosis in Cameroon” to BMC Infectious Diseases. We have revised the manuscript as required by the editor and reviewer’s, and do hope that it will now be fit for publication. The responses to the editor and reviewers are presented hereunder. In the main article text, we have indicated all changes or where the text has changed in blue.

We look forward to hearing from you soon.

Sincerely,

Fidelis Cho-Ngwa, PhD

RESPONSES TO EDITOR AND REFEREES

Editor:

Editor: I would suggest the authors consider combining and shortening the discussion and conclusions.

Response: Thanks for this suggestion. It has now been done. Also, based on the recommendation of referee number 2, we extended the discussion on MDR-TB slightly.

Referee 1:

Reviewer: Denise O’ Sullivan

Reviewer’s report:

• Minor Issues not for publication

Capital “R” should be replaced by small “r” when spelling regions.
Response: Thanks! This has been corrected throughout the manuscript

When referencing numbers less than ten, do not put zero in front. For instance 03 should be 3.

Response: Thanks! This has been done throughout the manuscript

Results, 3rd paragraph: Mycobacterium tuberculosis should be abbreviated to M. tuberculosis.

Response: This has been done

• Discretionary Revisions (which are recommendations for improvement but which the author can choose to ignore)

It would be helpful if the authors could comment on the levels of drug resistance in the other regions of Cameroon.

Response: Thanks! But such data do not exist yet. We are currently undertaking research on TB drug resistance in the other regions of Cameroon to eventually cover the whole country.

• Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Background, 2nd paragraph: This statement is contradictory “RIF is the main drug …. in Cameroon. INH, SM and EMB are …. in the country”.

Response: Thanks! This has been corrected

Methods, Bacteriological procedures: Can the authors comment on why one of the LJ slopes was supplemented with sodium pyruvate?

Response: Thanks! We have now indicated in the text that sodium pyruvate was added in one of the tubes for a given sample in order to stimulate the growth of any Mycobacterium bovis present

Discussion, 3rd paragraph: Can the authors comment on the relationship of HIV status and drug resistance in this study?

Response: Yes! We have computed this and realised that all the drug resistant isolates were from HIV negative people. We have inserted this as the last sentence of the 3rd paragraph of the Discussion section.

• Major Compulsory Revisions (which the author must respond to before a decision on publication can be reached)

Conclusion, first sentence: This sentence does not make sense unless the authors are surprised by this finding and if so they need to explain why.

Response: We have now deleted the sentence and revised the conclusion accordingly.

The samples used in this study are all smear positive so one must bear this in mind when looking at the results for the drug resistance survey. Why did the authors not report the results from the smear
negative isolates which had a positive culture? This would have given a better representation of tuberculosis in Cameroon.

**Response:** In TB literature, no association between smear positivity and drug resistance phenotype has been reported. We therefore believe that the isolates tested in the present study are not phenotype biased. As it is expensive and time consuming to culture and analyse MTBC species, we chose to optimise our chances of having MTBC isolates for the drug sensitivity pattern study by limiting the culturing to the smear positive samples. We did not include an alternative diagnostic procedure that could guide the inclusion of some smear negative samples. Since the sample size of isolates (149) used in the resistance analysis is large enough for a TB study, we did not find any strong justification for looking for more isolates from the smear negative samples, especially with the limited resources we had. Probably in future studies, this could be extended to the smear negatives to see if the latter samples could have a significant impact on the pattern and prevalence of TB drug resistance.

**Referee 2:**

**Reviewer:** Gunes Senol

**Reviewer’s report:**
MDR-TB is an important problem in Africa. I think this manuscript will obtain additional data. Method is acceptable, but standard microbiological terms should be used. So, I advise authors for consulting a microbiologist. Additionally, data should be discussed along with world resistance data.

**Response:** This has now been done. The changes and additions are indicated in the text in colour. We added some world MDR-TB resistance data in the Discussion section.

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

**Response:** Thanks! We have gone through the text again carefully and made some adjustments on the language. The changes are indicated in coloured text.