Author’s response to reviews

Title: Characterization of Non-Tuberculous Mycobacterium from Humans and Water in an Agro pastoral area in Zambia

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Author’s response to reviews:

Dear Editor/BMC Infectious Diseases

Please find our point by point rebuttal to the reviewer’s comments. We have managed to make corrections to the manuscript as observed and suggested by the reviewers. It should be mentioned here that not all changes were highlighted in the manuscript. Hope to hear a positive response from the editorial team.

Mohammed Abdelgadir Abdelmahmoud, MSc (Reviewer 1):

We appreciate the effort of work to the submitted manuscript above, and the wide spread of public significance of NTM, especially in one of developing countries such as Zambia, as you mentioned above that, it was the first manuscript which include molecular characterization, but to mate the wide distribution of global health problem of Mycobacterium tuberculosis, and None tuberculous mycobacteria, the manuscript needs some changes and language corrections before being published, so I recommend the suggested changes below,

First of all, the manuscript must be revised carefully between Authors before submission.

Rebuttal: The authors read the whole manuscript and improved where it was necessary to do so

Abstract is not sufficient to enhance readers to be focused about your problem, you know the Abstract is the key of quality of your work, we noticed that the method was not sufficient enough, you need to inform readers that what was done? and what was found clearly in the abstract?
Rebuttal: Sufficient information has been added to the abstract

- About Background part, sufficient information of relevant studies but, you just need to assign the numbers of references.

Rebuttal: This was done and corrected

About Material and methods, you need to state what was done and what was found in one sentences, state the study participants clearly in material and methods section, eg, 153 study participants were enrolled in our study? etc, is there any exclusion criteria, how many samples were positive and negative to the LJ culture medium, is there any exclusion criteria to the study participants, what was their age and sex? What was the characteristics of the study participants? About molecular characterization methods, you need to control your work, further more details must be done.

Rebuttal: This vital information was included in the manuscript as per suggestion

Discussion part is suggested and includes information and reports.

Rebuttal: Thanks for the compliment

Conclusion is adequate and supported by the data shown.

Rebuttal: Thanks for the compliment

Some of references are not in the format as per quidlines, format of the References for journal article is in some reference, Authors names followed by surname without space, Title of the manuscript, journal name, year Volume no. (issue no). :page number (starting page No. -ending page no).

Rebuttal: The references have been aligned according to the Journal requirements

Yuzo Suzuki (Reviewer 2):

1) How did the authors randomly selected the patients among the all of patients suspected TB? Please describe the detailed metrology, and also the following informations: during the study period, how many presumptive TB patients admitted the hospitals, and how many patients were diagnosed TB etc.

Rebuttal: The sampling information has been added
2) Please describe the background of the subjects: Age, Gender, Comorbidities, Xp/CT findings, Laboratory data etc.

Rebuttal: The study was done in rural district and as such services such as CT are not available, Comorbidities were not observed (eg HIV ) because they were not part of the study plan. However, np comorbidity of NTM /MTC were observed

3) Please describe the contributions of the study to public health in Zambia.

Rebuttal: This was the core of the study and the contribution has been described

4) Did the patients isolated NTM from the sputum were infected with the each pathogens or just contaminations?

Rebuttal: The isolated NTM was the cause of the observed clinical symptoms

5) Why these preliminary data reflect the prevalence of environmental in Zambia and also the regions?

Rebuttal: We sampled from the environment( water) hence the reporting

6) This manuscript need to edit by the native.

Rebuttal: The manuscript was to some extent reviewed by English speakers for grammatical edits

Sae Woong Park (Reviewer 3)

In this study, Monde and colleagues characterized the non-tuberculous Mycobacterium from Humans and Water samples in Zambia. Overall, this is the first study in Zambia to isolate and characterize NTM from humans and water simultaneously. However, it is needed to be improved before accepting manuscript.

Major points

1. In the Results part in Abstract, authors described "Based on morphological characteristics, acid fastness by the ZN method and 16S RNA analysis, 20 mycobacterial species were isolated from humans and 32 from water samples". However, only 7 and 23 species were identified to the species level from humans and water samples, respectively. What is the reason for not identifying the remained species?
Rebuttal: The other species were not NTMs

2. In the Conclusion part in Abstract, authors described "The isolation of similar NTM from humans and water in Namwala district has highlighted the public health significance of these Mycobacteria species". However, the only common NTM species from humans and water were M. fortuitum and M. avium even though the major species from humans and water sample were M. arupense and M. gordonae, respectively. Please let us know why authors concluded that isolates from humans and water had a similar NTM.

Rebuttal: The conclusion was presumptive based on the fact that M.fortitum and M. avium has been known to have some Public health significance especially in chronic patients. We therefore based the conclusion on the risk of humans being infected through consumption of water. Advanced molecular methods such as MLVA needs to be employed to have a more conclusive statement.

Minor points

1. Please follow the journal's submission guidelines for reference format, unit format, etc, …

The reference format for BMC Infectious Diseases in the main manuscript is a numbering. Please change all the references formatted with author name and published year to numbers.

2. Figure 1. Please provide a high quality figure.

3. Page 3. There are two Malama et al, 2014. Authors should distinguish two references. In the reference, there are Malama et al, 2014 and Malama et al, 2014c. One should be (a) and the other should be (b), not (c).

4. Page 6. Period is need after "AFB" in Collection and processing of Sputum Samples.


Rebuttal: We have made the above changes as suggested


11. Jarzembowshi, 2008. Pages were missed.

12. LeDantec et al, 2002. In the main manuscript, it was 2013. Please confirm it.

13. Malama et al, 2014c. Journal name and pages were missed.


16. Petroff, 1915. Please use capitalized letter for author name. Issue # is not needed.

17. Primm et al, 2004. Please write all authors instead of et al. Pages were missed. Issue # is not needed.


21. There are two Thomson et al, 2013. Please distinguish each other by (a) or (b).


Rebuttal: We have made corrections to the above suggestions and observations

Shetty Ravi Dyavar (Reviewer 5)

In this manuscript titled, "Characterization of Non-Tuberculous Mycobacterium from Humans and Water in an Agro pastoral area in Zambia", Monde et al isolated non tuberculous mycobacterium species from humans and water in Zambia. While the work is important, the authors detailed characterization of isolated species was not performed.
Major Comments:

1. The authors should first sequence the NTMs and find the differences between previous and the isolated NTM species in their study. They might need to check the differences in the total number of protein coding regions, differences in protein sequences as compared to the already reported isolates in that region or worldwide prevalent species, which is highly important to determine the novel species of NTMs. These sequence analyses should be presented in tabular forms or sequence alignment figure.

Rebuttal: The suggested methods are beyond the capacity of our laboratory. We are however, of the view that the 16s analysis was adequate to answer the preliminary question on the public health significance of NTM in Zambia.

2. Authors may need to show the clinical details of patients from whom the samples were received. For example, symptoms, pathological conditions and environmental characteristics etc. These should be presented in tabular form.

Rebuttal: The primary focus of this paper was on characterization of NTM. The biodata and clinical presentation of the patients from whom samples were taken were considered in a different paper.

3. The various NTMs isolated should also be presented in tree form to see the linkage between the isolated NTMs with existing forms of NTMs.

Rebuttal: The idea of presenting the results using the tree diagram was thrown out by the other reviewers. Their argument was that it was not adding any value to the paper.

Minor Comments:

1. Several language mistakes are there throughout the manuscript that need to be corrected.

Rebuttal: We have made some corrections.

2. Study approval by the University ethical committees needs to be included in the methods section.

Rebuttal: We have included this information.

3. The authors may need to submit the sequences of novel forms of NTMs to NCBI database for references and also if readers want to compare the sequence differences between the isolated and already existing NTMs.
Rebuttal: We will do as suggested