Reviewer's report

**Title:** Evaluation of Microscopic Observation Drug Susceptibility assay for diagnosis of multidrug-resistant tuberculosis in Viet Nam

**Version:** 2  **Date:** 8 September 2011

**Reviewer:** Lucia Barrera

**Reviewer's report:**

-- Major Compulsory Revisions

Abstract

1. Results related to cross contamination and risk of misdiagnosis of MDR TB due to the presence of non tuberculous mycobacteria should be mentioned

Methods

2. Inclusion criteria might be incompletely described. Detection of TB by conventional culture is too high (52.6%) and does not seem to correspond to suspects newly presenting to a hospital. Was this population screened by other method?

3. Volume of bacterial suspension inoculated in the plates is not specified

Results

4. Tables are missing

5. Specific mutations detected by MAS-PCR are not presented

6. Spoligotyping results are not presented

7. The title “Resolve discrepancy in resistant isolates…” is not correct

8. Sixth paragraph under this title. Reference 18 is not correct. Interpretation of INH false susceptibility may be eliminated, it is presented in the discussion

Discussion

9. Time to detection

   It might be necessary to revise statistical calculation for the difference between the time to detect grow by MGIT and MODs. Data and curves (figure 3) do not seem to be statistically different

10. Paragraph 10

   Risk of misdiagnosis of TB and, eventually, of drug-resistant TB using MODS method should be commented. It was not possible to differentiate non tuberculous mycobacteria by cording observation. This may pose a serious
drawback in settings with high prevalence of environmental mycobacteria. Besides, because of this limitation the method is not advantageous in relation to biosafety requirements as it is necessary to open the microtrite plates to identify the isolates.

- Minor Essential Revisions

Methods

11. Avoid repetition of information (e.g. reference methods are presented under titles Definition and Statistics)

Results

12. Text under the title MAS-PCR corresponds to Methods or, eventually, to Discussion

13. Resolve discrepancy....

Paragraph 1

Four (not three) samples were discrepant for RIF resistance

Discussion

14. Paragraph 2

It is worth considering the direct DST-LJ should have produced earlier results that indirect DST-LJ

Acknowledgements

15. Revise first sentence

References

16. It should be presented in accordance to instructions for authors

- Discretionary Revisions

17. Nitratase and colorimetric methods are not mentioned in the introduction where the authors bring up the tests endorsed by WHO for rapid detection of MDR TB.

18. Sample collection section may be eliminated from Methods. It is no relevant

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.