Reviewer’s report

Title: A first insight into the genotypic diversity of Mycobacterium tuberculosis from Rwanda

Version: 2 Date: 26 July 2012

Reviewer: Christopher McEvoy

Reviewer’s report:

Reviewer response: Gafirita et al, A first insight into the genotypic diversity of Mycobacterium tuberculosis from Rwanda.

General Comments.

The authors produced a valuable first report on M. Tuberculosis strain diversity in Rwanda, a country for which such studies have been neglected. In addition, drug resistance profiles of M. tb isolates and patient HIV status are available and the impact of the report is thus strengthened.

The techniques used to determine strain, HIV status and drug resistance are well established and the manuscript is simple and straightforward. Apart from the minor points detailed below the paper is suitable for publication.

Specific Comments

1. Pg 3, 2nd paragraph. Minor Essential Revision.

“Currently, the only data......drug resistance studies,.....

Please provide references for these drug resistance studies.

2. Pg 3, 3rd paragraph. Minor Essential Revision.

The first sentence suggests that all of the TB patients were from Kigali whereas in the “Study setting” section on pg 4 it states that they were from “several health units in Rwanda”. Please clarify this. If possible mention whether patients were from a localised region of Rwanda (eg Kigali) or whether they were located country-wide.

3. Pg 10, 2nd paragraph. Discretionary Revision

The largest cluster and 31.8% of the total isolates belong to SIT52. Is this SIT known to be present in neighbouring countries? Has the author’s previous work in Uganda identified this strain? What can be inferred regarding migration, geography etc regarding this strain?


The authors point out that high clustering rates (as seen in this study) are associated with high transmission frequencies which, in turn, are associated with HIV positive sero-status. However, the proportion of HIV positive sero-status in the unique (non-clustered) strains is 19/36 (53%), by my quick count, compared
to only 45.7% overall. Please comment.

5. Pg 11. Discretionary Revision

A major finding of this study was the extremely high proportion of MDR cases and in particular the rapid rise in MDR since previous studies (refs 32 & 33). I feel that this should be emphasised more and comment made on possible reasons for the higher number of retreatment cases seen in this study which might be the cause of the higher MDR rate. Comment could also be made on the study of Umubyeyi et al (Int J Infect Dis, 2008) who found low rates of resistance to second line anti-TB drugs. It would be interesting to know whether this resistance rate has also increased.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests