Reviewer's report

Title: Contribution of two revelation systems of in house PCR (colorimetric and non colorimetric) in the diagnosis of Pulmonary Tuberculosis in Brazilian patients with and without HIV infection

Version: 1 Date: 31 August 2010

Reviewer: Kim Musser

Reviewer's report:

This report describes a well designed comparison of two in-house/ laboratory developed PCR methods for the diagnosis of pulmonary TB including a comparison of HIV status and history of past TB treatment. As would be expected PCR with the additional dot blot detection was a more sensitive test.

There are a number of minor essential revision needed in my opinion:

Title- Perhaps a better more clear title- Comparison of two laboratory-developed PCR methods for the diagnosis of pulmonary tuberculosis in Brazilian patients with and without HIV infection.

general: Consider switching to laboratory-developed instead of in house throughout
Throughout "+" and "+" symbols after HIV are not consistent.
refs sometimes are in ( ) and sometime sin [ ].
Consider switching language of "non-previously treated for TB" to "with no history of prior TB treatment"
Not necessary to add in colorimetric and noncolorimetric as part of description.
Pulmonary Tuberculosis and Tuberculosis do not need to be capitalized throughout.
Titles are not consistent in their capitalization of some words

Abstract- line 55 remove "the"
line 59 write out polymerase chain reaction (PCR)- short name comes second at first use
line 66 culture should not be capitalized
line 67- "The" before Gold, remove "the" before culture, change positive to positivity
line 68 add "meeting" before the/

Better sentence: The gold standard was culture positivity combined with meeting the definition of clinical pulmonary TB.
line 69 Results should be bolded and on separate line like other subtitles, no
colon. Throughout "+" and "-" symbols after HIV are not consistent.
line 76 need period at end
Background: line 88 add "with" after present
line 101 HIV- was already defined as seronegative so that word can be removed.
Methods:
line 199 need space between at and public
line 127 typo in ineligible
line 136 Logistics
line 151- sentence needs to be rewritten
line 153 up to and less than are redundant, space needed before 14
line 154 typo in enrollment
line 161 need space in Ziehl Neelsen
Line 164 Lowenstein missing "n"
lines 168, 177 ultraviolet different spellings
line 178 need period
line 182 extra period
Lines 184-188- need more description of what was used for controls and the amount of DNA used for inhibition test.
Was a PCR flow utilized to avoid cross-contamination?
Results
line 210 "non-previously treatment" is not good english structure
line 277 need space
Lines 221-222
Better title needed "according the history of anti-TB treatment" is not good sentence structure
PPV and NPV values should have %. Line 226 need period
line 236-237 "two" should not be italic
Line 250 extra t after )
line 255 Title should be bolded
Line 256
Figura should be figure
Discussion
line 316 The IS6110 target is often a multi-target element and is known to
increase sensitivity compared to other PCR targets. Even though there are rare reports of the absence of this target this should not explain overall sensitivity decreases.

Conclusions: Although the dot blot test is a more sensitive test it does require additional steps post PCR that is not performed properly could lead to contamination and incorrect diagnosis. Perhaps some commentary on the care that needs to be taken to avoid cross contamination when using a test such as this.

References: periods after year throughout and at end- is this the correct format?Reference 34 Perhaps a better representation of the API Consensus Expert Committee should be used. ref 36 missing period at end.

Tables inconsistent use of capitalization and PPV and NPV values should have %

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

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

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

**Declaration of competing interests:**

I declare that I have no competing interests.