Reviewer's report

Title: Cytokine response to selected MTB antigens in Ghanaian TB patients, before and at 2 weeks of anti-TB therapy is characterized by high expression of IFN-gamma and Granzyme B and inter-individual variation

Version: 2 Date: 24 June 2014

Reviewer: Simani Gaseitsiwe

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- Major Compulsory Revisions

The study addresses an important question in TB research: The quest for biomarkers for TB treatment response. The manuscript is well written and is easy to follow. However, a few important questions need to be answered:

1. As the study wants to use Mtb specific cytokines as predictors for treatment outcome, would it not be better to use a cohort in which the treatment outcomes vary rather than the current cohort where the treatment outcome is the same at 2 months (pg 10 line 187-188 All except one subject converted to a negative sputum smear at 2 months of treatment)? If the treatment outcome is the same (I fail to see any other measure of treatment outcome in the whole manuscript besides the sputum smears at 2 months) why should we expect the cytokines measured to differ?

2. Despite having access to PBMCs, the authors decided to focus only on the cytokine released and not on the phenotypes of the cells that release the cytokines. It is not clear why this was the case whilst it is clear from the literature that the phenotype of the cells releasing the cytokines is just as important in determining the quality of the immune response to an antigen. The authors need to justify if their choice of experiments were best suited to address this important question more so that they do not mention this as a limitation.

3. It would be important to mention in the manuscript what motivated the selection of the 6 cytokines that were measured.

- Minor Essential Revisions

1. Pg 14 Line 266, do away with the second to
2. Pg 14 line 272, do away with is
3. Pg 15 line 278, should be ... CD8+ T cells
4. Table 1, Font and style should be improved

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'.