Reviewer's report

Title: In vivo expression of innate immunity markers in patients with mycobacterium tuberculosis infection

Version: 2 Date: 8 June 2010

Reviewer: Zahra Toossi

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There are a number of concerns regarding the interpretation of this manuscript. This remains an issue despite the extensive clarification of the revised work and its substantial improvement.

Major Compulsory Revisions;

1. The data remain limited to expression of Sp110 and Coronin-1 and TLR mRNA in circulating PBMC. Elevation of expression of these molecules in patients with active TB and LTBI (compared to un-infected groups), and their correlation with each other remains very interesting, likely underscoring immune activation associated with active MTB infection (whether it is contained as in LTBI or uncontained as in active TB). However, the over-interpretation of the findings for Coronin-1 as written on page 11 (Discussion) is not justified. The majority of patients here (cavitary TB) suffer from reactivation of foci of pulmonary MTB infection. There is no evidence of infection of circulating monocytes in humans during reactivation of TB to allow the authors to draw parallels with acute infectious process in animal studies of acute MTB infection. This overinterpretation undermines the findings. If the authors wish to indicate that re-circulating monocytes (from sites of infection) contain live MTB because of or associated with increased expression of Coronin-1, supporting data should be presented. The same limitation pertains to the interpretation of the more controversial gene, Sp1110 (page 12).

2. In the LTBI group particularly it is hard to know the significance of the data. By the Quantiferon data presented, this group is clearly is infected with MTB. Again it is hard to attribute increased mRNA of Sp110 and Coronin-1 in circulating PBMC other than to immune activation. Comparison with other well-known genes associated with immune activation (e.g. TNF) may clarify this.

3. The Discussion should be focused on the findings and less speculative.

Minor; The authors flip-flop between TB and Tuberculosis, and the abbreviation TBC is not explained.

Authors may address the criticism as major revision again

Quality of written English: Acceptable

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