Reviewer’s report

Title: Altered Serum miRNAs as Biomarkers for the Early Diagnosis of Tuberculosis Infection

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Reviewer: Francesca Mariani

Reviewer’s report:

The study proposed by Yuhua Qi et al tries to identify a group of microRNAs suitable to diagnose early TB infection by analyzing serum samples.

Major Compulsory Revisions:

a. Such a topic has been addressed also by other groups quite recently, and, as it often happens, their results are different. Anyhow the authors should comment on the differences between their data and those found by, for example, Maertzdorf et al., PNAS 2012; Wu et al., Human Immunology 2012; Wang et al., PLOS One 2011.

b. a better description of the TB patients should be provided, because it is not specified whether they are all 30 pulmonary TB patients or not, and it would be useful to know individual data as:

<table>
<thead>
<tr>
<th>Patient</th>
<th>Gender</th>
<th>Age (yr)</th>
<th>Diagnosis</th>
<th>Pulmonary Radiology</th>
<th>Sputum Smear</th>
<th>TST</th>
<th>T-SPOT.TB</th>
</tr>
</thead>
</table>

c. The individual results of q-rt RT-PCR confirmation of the altered miRNA expression should also be shown, in order to verify the significance of the up or down-regulation of each miRNA

d. finally, a brief description of the possible predicted target genes of the group of miRNA validated as biomarkers (miR-361-5p, miR-889 and miR-576-3p, which, by the way, were found down-regulated in TB patients by Maertzdorf et al., PNAS 2012) should be provided and discussed.

The authors say themselves that their study represents a preliminary investigation, and, actually their experiments are limited. Anyhow, by providing the requested data, it could 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