Reviewer's report

Title: The pathogen recognition sensor, NOD2, is variably expressed in patients with pulmonary tuberculosis.

Version: 1 Date: 14 June 2007

Reviewer: Giovanni Ferrara

Reviewer's report:

General

"The pathogen recognition sensor, NOD2, is variably expressed in patients with pulmonary tuberculosis" by Lala et al. The study deals with the expression of NOD2, an intracellular pathogen recognition sensor, that could play an important role in tolerance toward Mycobacterium tuberculosis, increasing resistance to pro-apoptotic mechanisms. Despite the small sample size, the main finding of the Authors are that NOD2 expression correlates with TLR2 and TLR4 in BAL cells of tuberculosis patients and it's increased in PBMCs of tuberculosis patients after treatment. The first message could be interesting for improving what we know about intracellular interactions between the pathogen and the immune system, the second finding could have even practical implications in clinical practice, if the NOD2 expression will be confirmed as a good marker of treatment success in a properly designed study with a larger serie of patients. Despite the questions are well formulated and the sequence of experiments well presented, I would invite the Authors to answer the following comments.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1) data on NOD2 expression in BAL cells could be biased by the different cellular populations in TB patients and control. Is it possible to present the data correcting the results for the differential cell counts? (e.g. for alveolar macrophages?)
2) the number of patients and controls enrolled should be reported among the results.
3) It would be correct to describe the methods of in vitro experiment of infection with mycobacteria, in particular the number of PBMCs infected in every well and the multiplicity of infection used. Given the correlation between NOD2 and TLR2 and TLR4 in alveolar cells, I wonder if the Authors performed some experiments stimulating PBMCs with LPS and LAM, even if not considered strictly necessary for this study.

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Discretionary Revisions (which the author can choose to ignore)

What next?: Accept after minor essential revisions

Level of interest: An article of importance in its field

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.