Reviewer's report

Title: Oral intake of Phenylbutyrate and vitamin D3 upregulates the Cathelicidin LL-37 in human macrophages: A dose finding study for treatment of tuberculosis

Version: 3 Date: 17 February 2013

Reviewer: Alex Sánchez-Pla

Reviewer's report:

Minor essential revisions

The statistical analysis in this study seems to be well performed, and the word "seems" comes from the fact that apart of a short paragraph with the names of the methods applied no more information is given about the statistical analysis. This reviewer would find helpful to have

- Some reflexion about the validity of the tests applied, for instance was a sphericity test performed before repeated measures ANOVA was applied? What to say about normality of the data.
- Significance is mentioned in several places but it is hard to follow which comparisons have been performed. A supplementary table specifying the comparisons that have been found to be significant would make the text easier to follow, especially the conclusions.

Discretionary revisions

Apart of this the main concerns in this study come from the small sample size, not to say the potential selection bias that might appear in selecting the candidates from the same working place.

The authors recognize in the discussion that the small sample size is indeed a limitation. However it would probably be worth to do some power analysis in order to estimate the power of their conclusions.

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.