Reviewer's report

Title: Detection of hydrogen peroxide-producing Lactobacillus species in the vagina: a comparison of culture and quantitative PCR among HIV-1-seropositive women

Version: 2 Date: 16 July 2012

Reviewer: Jimmy Twin

Reviewer's report:

The key finding from this paper is that there are differences between specific Lactobacillus qPCR screening and traditional culture, with qPCR exhibiting a greater sensitivity than culture and qPCR unable to distinguish between H2O2 and non-H2O2 producing Lactobacillus strains.

While the authors addressed the majority of the comments satisfactorily by both myself and the other reviewer, a few key points can be further clarified to highlight these findings for the reader. I believe these changes can be trusted to be made by the authors.

Minor Essential Revisions

1. Care needs to be taken with the concluding paragraph of the abstract to avoid speculation. In the initial review process, clarification was requested to describe to what extent L. gasseri accounts for the discrepancy found between results. The authors addressed this by explaining how the small subset tested (n=16) cannot give an accurate estimation of this. The authors should clarify for the readers in the abstract that preliminary analysis was carried out on a subset of 16 samples suggesting L. gasseri may account for this discrepancy. In addition, avoid concluding remarks suggesting the qPCR assays specific for L. crispatus and L. jensenii possibly also detect other Lactobacillus spp. without providing evidence, as it brings into question the specificity and therefore choice of these assays for this and other studies.

2. Ensure consistent usage of italicized “Lactobacillus” as a few discrepancies remain.

3. The authors have included references as requested but care must be taken when stating that L. iners does not produce hydrogen peroxide, as a small percentage can (Antonio M, Hawes S, Hillier S. J Infect Dis. 1999;180(6):1950-6.).

Discretionary Revisions

1. Minor comment and feel free to disregard, but reference #13 is sited in two consecutive sentences which could be combined into one sentence and a single reference.
**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