Author's response to reviews

Title: Identification and characterization of vaginal lactobacilli from South African women

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Author's response to reviews: see over
Response to reviewer 1

General comment
Authors have revised the manuscript and improvements can be seen from the revised version. However, still, the number of the samples is a major concern since it refers to the accuracy of the study. The reviewer still cannot be persuaded to accept a conclusion based on limited sample analysis.

Authors agree that it is difficult to draw a conclusion on the basis of small sample size but the fact that these 40 women who were recruited randomly represent the population in the township Soweto could not be ignored. Realizing this, the authors had discussed the limitation of small sample size and have stated that these results need to be confirmed in a bigger cohort. The authors are now referring to “cohort of South African women” rather than “South African women” throughout the manuscript as suggested by Reviewer 4.

Specific Comments

1. Line 156, “16S ribosomal DNA (rDNA) gene” is not correct. You can call it either “16S ribosomal DNA” or “16S ribosomal RNA gene”.

Correction has been made as 16S ribosomal DNA or 16S ribosomal RNA gene. Lines: 39, 158, 159 and 166.

2. You should abbreviate the genus name once it appears for species with same Genus.

Genus name has been abbreviated when appropriate. Including Lines: 167 to 173.

3. Accession number should be provided if you use published bacteria gene sequences.

All the accession numbers have been added to the respective species as suggested. Lines: 168 to 173.

4. Line 173, “gram stain” should be “Gram stain”.

“gram stain” has been corrected to Gram stain. Line 177.

5. Check again all the spells thru the manuscript.

Manuscript has been checked thoroughly for any misspells.
Response to reviewer 3

General comment

Most of my previous suggestions have been competently answered, although no followed. However, I shall now recommend publication based on the positive will of two of the other referees plus some improvements/modifications included in the manuscript.

The authors would have performed the suggested experiments as it is of great importance to study the possible antagonistic properties of different *Lactobacillus* species and strains. But due to the time constraint and other factors as mentioned in the previous response, it was not possible to conduct those experiments in a short time. Again as said, we hope to be able in the future to identify the possible factors that are involved in the ability of *L. crispatus* to contribute to the health status using a comparative genomic approach.

Response to reviewer 4

General comment

The authors have addressed the majority of comments satisfactorily and the manuscript is much improved from the original version. Addition of Table 1 with study participant characteristics is useful.

Specific Comments

1. In the results section of the abstract, the authors state that *L. crispatus*, *L. iners*, *L. jensenii* and *L. gasseri* were the predominant species in South African women. Why was *L. vaginalis* not included in this list given both *L. jensenii* and *L. vaginalis* were present in 5 women each? It would be better to tone down the statement that these were the dominant lactobacilli in South African women given that this is a small sample size.

Exclusion of *L. vaginalis* was not the intension and it has now been added to the list of predominant species. Lines: 48-49

As suggested, authors agree that it would be better to tone down such a statement and possible changes have been made which are visible in the following sentences: Either the term “South African women” was removed or replace by “cohort of South African women”. Lines- 49. 55, 220 and 337-338.

2. In the conclusion section of the abstract, the word “microbiota” should be changed to “species.” Microbiota typically refers to all bacteria. This comes up later in the manuscript as well.

Suggested correction has been made and microbiota has been changes to species. Lines: 35, 55, 103, 257, 337.
3. The manuscript will benefit further from editing for language. For example in the Introduction “Some studies report differences in the composition of vaginal microbiota between ethnicity in North America such as a higher…..” This sentence is confusing. There are occasional typos.

In the background section, the above mentioned statement has been rephrased in a simplified version to avoid any confusion. Lines: 105 to 108.