Reviewer's report

Title: Identification and genotyping of bacteria from paired vaginal and rectal samples from women at 35 weeks of gestation indicates similarity between vaginal and rectal microflora

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Reviewer: SVETLA DANOVÁ

Reviewer's report:

1. Major revision

2. General comments:

The present paper evaluates the similarity between vaginal and rectal microflora of pregnant women at 35 weeks of gestation. The title is correct and precise, but a little long. To my opinion it could be shortened: Ex. Identification and genotyping of bacteria from paired vaginal and rectal samples from pregnant women indicates similarity between vaginal and rectal microflora.

Overall the abstract and the manuscript are well structured in accordance with journal’s instructions, but the English could be carefully checked:

- Page 2, results: “Among the 844 isolates that could be identified by tDNA-PCR, a total of 63 bacterial species were present,........
- Page 9 :“L. gasseri was the most frequently isolated Lactobacillus species from the rectum (20/132 subjects positive), followed by L. jensenii (16) and L. crispatus (14). L. iners could be isolated rectally from only 2 subjects

The first paragraph- “Background” is much too heavily focussed on the subject of the investigation. In the same time the aims of study are clearly stated. The work appears to be carried out appropriately, however some results are presented in unclear manner. Principally the approaches are valid for the identification and genotyping of bacterial isolates. However, there are some aspects of the work that require further attention, and that would benefit from additional efforts. Overall, the applied parameters (especially the modified method of Gram staining) do not seems to provide clear cut rational and differential criteria for precise bacterial discrimination into the community of more than 50 species presented into the vagina. Therefore, more specificity could be given in the paragraph Methods, especially for the methods of identification used (see comments below). This paragraph needs a careful edition:

- The methods for identification of isolated bacteria could be briefly presented. There is no information about the primers and conditions of PCR analyses of Lactobacillus microflora. The cited references [8, 17,18] are useful for Streptococci, Enterococci and BV associated microflora.
- Kindly expand the abbreviation tDNA-PCR, at least according to the rule – “first
use”

• Please, precise how the significant part of isolates were identified to the species level, before to discuss the biodiversity and similarity between rectal and vaginal microflora

The results obtained are summarized in two tables and four figures, created directly from the Gene scan 3.1 software. I doubt only about this form to present the results from RAPD analyses. The authors should consider how to facilitate the results illustration. The dendrograms, derived from the raw data could be appropriate manner to prove the similarity and identity of the tested pairs of vaginal/rectal isolates (see as a possible model of presentation the article: Bernard Berger, R. David Pridmore, Caroline Barretto, Francoise Delmas-Julien, Kerstin Schreiber, Fabrizio Arigoni, and Harald Brussow (2007) Similarity and Differences in the Lactobacillus acidophilus Group Identified by Polyphasic Analysis and Comparative Genomics JOURNAL OF BACTERIOLOGY, Feb. 2007, p. 1311–1321 Vol. 189, No. 4 ). Also check carefully for mistakes the data in Table 2

The discussion is rich, punctual and showed a good knowledge of authors on the problem studied. Different aspects of presented data were discussed in accordance with last achievements of different researchers.

Overall is a high-quality investigation with a poor style of presentation

3. Specific comments

I would like to propose some minor edition:

• Page 3 replace “with regard to clonal identity between vaginal and rectal isolates “
• “with regard to strain identity between vaginal and rectal isolates

• Page 4- Very long sentences: “It is…….”

• Page 5 GBS-screening - Kindly expand the abbreviation

• Page 8 – “The most common species recovered from grade Ia, Ib and lab specimens were

• Lactobacilli”- The most common genus recovered from grade Ia, Ib and lab specimens was Lactobacillus. Or “A predominance of lactobacilli have to be noted……”

• The species is not possible to determine only by Gram staining, but morphologically the strains belonging to different genus could be differentiated.

• Page 9- please verify number of strains L. gasseri (40) and L. iners (14) and……... (20/132 subject positive) with the values given for the same species in the Table 2

• Page 11- Did the authors use a referent type strain (ex. L. gasseri ATCC 9857, L. jensenii ATCC 25258 or others) in the genotyping assay?

Level of interest: An article of importance in its field
Quality of written English: Needs some language corrections before being published

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