Reviewer’s report

Title: Towards Microbiome Transplant as a Therapy for Periodontitis: an Exploratory Study of Periodontitis Microbial Signature Contrasted by Oral Health, Caries and Edentulism.

Version: 2 Date: 18 August 2015

Reviewer: Pinar Gumus

Reviewer’s report:

Alex E. Pozhitkov, Brian G. Leroux, Timothy W. Randolph, Thomas Beikler, Thomas F. Flemmig, Peter A. Noble have submitted the paper entitled “Towards microbiome transplant as a therapy for periodontitis: an exploratory study of periodontitis microbial signature contrasted by oral health, caries and edentulism”.

The manuscript is interesting and has a different perspective about periodontal therapy. Therefore, the researchers investigated and compared the microbial habitat in periodontitis, oral health, caries and edentulism. The study has shown important results about the microbial differences in health and disease, which can help us to understand the mechanism of periodontal diseases and also can be helpful for the therapy as the authors mentioned.

I have some comments concerning the manuscript:
Generally, the manuscript is a bit complicated and it is difficult to understand. Also, the authors suggested a new treatment method for periodontitis but in the manuscript the mechanism is not clear how it works or how to apply or others? Maybe, it would be nice to find authors comment about these points.

Major Revisions:
1) The aim of the manuscript is clear but the results and the discussion parts are not enough to support the aim. I think the authors need to clarify the steps of this new therapy for periodontitis especially what they expect from this new therapy.

2) In the introduction, the example of clostridium difficile infection parts are not clear and not enough to support the microbiome transplant as a therapy for periodontitis.
I think another references are required to support the hypothesis of microbiome transplant in the introduction part.

3) The second aim of the study is not explained in the introduction. Please add an additional paragraph and references.
I think the sodium hypochlorite experiments could be the scope of another study. This aim is not defined in the introduction and not discussed well. Moreover, The cytotoxicity of this prepared solutions are also very important. But there are no data about this.
4) In the discussion part, the results are not well discussed. It would be nice to discuss the results according to the aims of the manuscript.
5) Conclusions part is insufficient and it does not support the authors' ideas enough. Please rewrite this part.

Minor Revisions:
1) I think the introduction part is a bit long. For example; the third paragraph can be moved to discussion part.
2) I think the fourth paragraph of the introduction is well written and mentions a good point. Maybe, the authors can emphasize a bit more about the advantage of this new treatment in this paragraph.
3) The sample collection part needs to be clarified about pooling.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
I declare that I have no competing interests.