

Dear editor and reviewers,

Please find enclosed the revision of our manuscript "Polymeric Vs hydroxyapatite-based scaffolds on dental pulp stem cell proliferation and differentiation" with Manuscript number: 20508.

We would like to thank you for handling the review process of the above manuscript. We also would like to thank the reviewers for their careful reading of this manuscript and their constructive comments.

In the following, we describe our response to each of the comments of the reviewers and the changes we have made to the paper. To help legibility of the remainder of this response letter, all the reviewers' comments and questions are typeset in bold italic font. Our responses and remarks are written in plain font. The changes made in our revised manuscript are highlighted.

Reviewed by 00503043

This study was designed to evaluate behavior of hDPSCs including adhesion, proliferation, morphology and differentiation on four different scaffold biomaterials. Their finding indicates that PLLA (Synthetic) scaffold supports adhesion, proliferation and osteogenic differentiation of hDPSCs. Therefore, it can be useful for the purpose of craniofacial tissue engineering. The study is well designed and results are clear and support the conclusions. I think it is suitable for accepting the manuscript for publication.

Response: Thank you

Reviewed by 02519158

Overall topic of the paper is interesting, due to possibility of translating obtained results into clinical practice in the reconstructive medicine. This study is well designed and experiments are described in detail. For these reasons, I find this article to be worthy of publication. However, I would like to make some comments in the following points:

1. It is not clear, if observed supporting effect of PLLA scaffold is statistically significant. I suggested to supplement article with information on statistical analysis (e.g. P-values) and to add error bars (SD or SEM) in Fig. 2 and 3.

Response: Statistical analysis has been conducted for figure 3 and this figure has been modified accordingly. However, regarding DNA counting assay represented in figure 2, we were not able to conduct any statistical analysis, since the experiment was repeated only couples of times. We will consider this suggestion in our future publications.

2. In references, bibliographic information in items 12. and 18. should be supplemented.

Response: the references have been modified.

3. I suggest to supplement references with some literature of topic, such as: a) Tatullo et al. Dental pulp stem cells: function, isolation and applications in regenerative medicine. J Tissue Eng Regen Med 2014 DOI: 10.1002/term.1899. b)Ling et al. The effect of calcium phosphate composite scaffolds on

the osteogenic differentiation of rabbit dental pulp stem cells. *J Biomed Mat Res* 2015; 103(1): 1732-1745. c) Akkouch et al. Engineering bone tissue using human dental pulp stem cells and an osteogenic collagen-hydroxyapatite-poly (L-lactide-co-ε-caprolactone) scaffold. *J Biomater Appl* 2014; 28(6): 922-936. d) Hilkens et al. Dental stem cells in pulp regeneration: near future or long road ahead? *Stem Cells Dev* 2015 doi:10.1089/scd.2014.0510.

Response: These papers have been included in the revised version.

Thank you