Inspired Materials & Stem-Cell Based Tissue Engineering Laboratory

To

The Editor

World Journal of Stem-Cells

12/26/2018

RE: Cover letter for resubmission and response to reviewer's comments

Name of Journal: World Journal of Stem-Cells

Shweta Anil Kumar, Monica Delgado, Victor Mendez, Binata Joddar

We are resubmitting our revised manuscript based on original research study titled 'APPLICATIONS OF STEM-CELLS AND BIOPRINTING FOR POTENTIAL TREATMENT OF DIABETES' to your highly esteemed journal for consideration of publication. We have revised the paper according to the author guidelines provided, taking care to include the PubMed Index and the DOI to each of the references and also the details regarding the supporting grants. Please note that the references highlighted in green are not indexed on PubMed and we have included the prints of the first page for each of those references as instructed, in a separate folder that will be uploaded with the remaining documents, upon submission.

The reviewers` comments have been considered and the modifications incorporated.

Reviewer: 1

Comments to the Author

This is an important review article describing the bioprinting technique of cell-based therapies. MSCs used for clinical trials in diabetes mellitus type 1 in Table 1 may be specified whether it was human MSCs or not. The three bioprinting methods which are ink jet bioprinting, extrusion bioprinting and laser assisted bioprinting in Figure 2 may be labeled and explained briefly in the figure legend.

Response: Thank you for your kind suggestion. Table 1 has been modified specifying that human UC (umbilical cord)- MSCs were used. Brief descriptions of the bioprinting techniques have also been incorporated in the figure legend as asked by the reviewer.

Reviewer: 2

Comments to the Author

This review is interesting, showing us the present state and the future possibility of the biopriting technique in

the application to regenerative medicine for the treatment of diabetes. Since I am not a specialist of the bio-printing technique, I cannot give specific comments from that standpoint. The only concern I have is about Figure 1, which is rather misleading from the following two points. First, insulin does not bind to glucose but binds to its receptor on the target cells to augment their glucose uptake. Secondly, the pathophysiology of T2DM starts with insulin resistance, which promotes beta cell hyperplasia and upregulates insulin secretion to compensate high blood glucose levels. After sustained insulin resistance for years, pancreatic beta cells begin to exhaust, and insulin secretion becomes deficient. To avoid the misunderstanding of the readers who do not specialize in diabetes, Figure 1 should be modified. Below is an example. I am happy if it is of use to authors to up-grade Figure 1.

Response :The authors would like to express their gratitude to the reviewer for his/her valuable insight and also for providing a sample figure that aided the authors in making the corrections. The reviewer`s concerns have been taken into consideration and the figure has been modified in accordance with his/her comments.

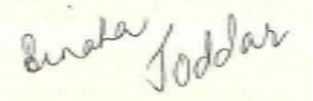
Reviewer: 3

The minireview is focused on the application of stem cells and bioprinting for the treatment of degenerative diseases and, in particular, of diabetes. the paper is well written and of interest.

Response : The authors are grateful to the reviewer for his/her valuable feedback.

Thank you for your consideration and time.

Yours sincerely,
Binata Joddar, PhD.



Assistant Professor.
Department of Metallurgy, Materials and Biomedical Engineering
University of Texas at El Paso
500W University Avenue, M201J Engineering Building
Phone: +1 (915) 747-8456
Fax: +1 (915) 747-8036
E-mail: bjoddar@utep.edu