

October 2023

Name of journal: *World Journal of Transplantation*

Manuscript ID: 88300

Title: Limbal Stem Cell Deficiency and Limbal Cell Transplantation: current perspectives

Dear Editor-in-Chief of the World Journal of Transplantation,

On behalf of the other authors and myself, I would like to extend my gratitude for the efforts and time spent reviewing our submission. The Reviewer make excellent points and offer valuable suggestions to improve the manuscript. **Please find the responses in bold font under each of the comments made by the reviewer below, which can also be found with track changes in the revised manuscript:**

Reviewer 1 (number ID: 05573818)

This mini review is interesting and meaningful. The authors presented the basic information of limbal stem cell and the clinical characteristics and therapeutic outcomes of limbal stem cell deficiency (LSCD). Specifically, this topic falls squarely within the scope of our journal.

We are grateful for the positive comments by the Reviewer.

However, I have to provide several suggestions. 1 Title. The title should be changed. Limbal Stem Cell Deficiency and Limbal Cell Transplantation: current perspectives. The title should be focus and present title was confusing.

As suggested by the Reviewer, the title has been modified to read: "Focus on Limbal Stem Cell Deficiency and Limbal Cell Transplantation"

2 Abstract. The abstract should be concise. Please delete irrelevant part.

The abstract has been modified and shortened as follows:

"Limbal stem cell deficiency (LSCD) causes severe vision impairment and can lead to blindness, representing one of the most challenging ocular surface disorders. Stem cell deficiency can be congenital or, more often, acquired. The categorization of ocular surface transplantation techniques is crucial to achieve treatment homogeneity and quality of care, according to anatomic source of the tissue being transplanted, genetic source, autologous or allogenic transplantation (to reflect histocompatibility in the latter group), cell culture and engineered tissue techniques. The aim of this minireview is to provide a summary about the management of limbal stem cell deficiency, from clinical characteristics and therapeutic outcomes to the development of novel therapeutic approaches. The manuscript also briefly summarizes recent findings in current literature and outlines the future challenges to overcome in the management of the major types of ocular surface failure."

3 Key Words. Yes. 4 Background. Corneal epithelial stem cells (LSCs) reside preferentially in the basal layer of peripheral cornea in the limbal zone[1, 2], we lack a specific marker for those cells, in fact, the methods used for their identification are indirect. Several mistakes, Corneal epithelial stem cells (LSCs)? The sentence was too long. Please reorganize.

The sentence has been modified as suggested to read:

"Corneal epithelial limbal stem cells (LSCs) reside preferentially in the basal layer of peripheral cornea in the limbal zone[1, 2]. There are no current specific marker for these cells. The research methods used for the identification of these cells tend to be indirect."

5 Methods. Yes. 6 Results. DIAGNOSIS AND STAGING OF LSCD. This part should re-organize. The diagnosis method of LSED is Cytology, confocal Microscopy and AS-OCT. I strongly encourage the author provide the typical pictures of each stage of LSCD with Cytology, confocal Microscopy and AS-OCT detections. b. In-Vivo Confocal Microscopy (IVCM)?

In accordance with the suggestions made by the Reviewers, the organization of this section has been modified. Pictures have been added, when possible.

7 Discussion. Yes 8 Illustrations and tables. Please provide several figures to better clarify LSCD and diagnosis and treatment ways.

Figures have been added to show examples of different types of LSCD.

9 Please polish the sentence. Several grammar errors were found in the manuscript.

The manuscript has been corrected by a native English-speaking doctor.

We thank the Reviewer for a very thorough evaluation of our manuscript. Excellent points have been raised that can improve our manuscript. We have tried to address each point raised with appropriate modifications, which can be viewed with the track changes throughout the manuscript. We are glad to address further issues if needed.

Company Editor-in-Chief

I have reviewed the Peer-Review Report, full text of the manuscript, and the relevant ethics documents, all of which have met the basic publishing requirements of the World Journal of Transplantation, and the manuscript is conditionally accepted. I have sent the manuscript to the author(s) for its revision according to the Peer-Review Report, Editorial Office's comments and the Criteria for Manuscript Revision by Authors. The quality of the English language of the manuscript does not meet the requirements of the journal. Before final acceptance, the author(s) must provide the English Language Certificate issued by a professional English language editing company. Please visit the following website for the professional English language editing companies we recommend: <https://www.wjgnet.com/bpg/gerinfo/240>. Authors are required to provide standard three-line tables, that is, only the top line, bottom line, and column line are displayed, while other table lines are hidden. The contents of each cell in the table should conform to the editing specifications, and the lines of each row or column of the table should be aligned. Do not use carriage returns or spaces to replace lines or vertical lines and do not segment cell content.

We thank the Editor -in-Chief for a very thorough evaluation of our manuscript. I am a native English-speaking doctor, born and raised in Canada with a BSc degree from the University of Toronto. I have checked and edited the English. The tables have been formatted in accordance to the journal guidelines.

Once again, the valuable comments and assistance with our paper is greatly appreciated. We look forward to your final decision regarding our modifications, and are ready to address further issues if necessary. We hope that all concerns have been addressed in an appropriate manner.

**Kind regards,
Marco Zeppieri, on behalf of all coauthors.**