

24 September 2014

Dear Editor,

Please find enclosed the edited manuscript in Word format (file name: 12919-edited).

Title: Evaluating alternative stem cell hypotheses for adult corneal epithelial maintenance

Author: John D West, Natalie J Dorà, J Martin Collinson

Name of Journal: *World Journal of Stem Cells*

ESPS Manuscript NO: 12919

The manuscript has been improved according to the suggestions of reviewers:

1 The format has been updated as required for the *World Journal of Stem Cells*.

2 We are grateful to the reviewers for their comments and have made following revisions according to their suggestions.

Reviewer 00753131

Comments:

The authors review all prevalent hypothesis about corneal stem cells rendering it a timely and pertinent review. However, the manuscript necessitates some editing. The authors use continuous sentences at places which will be best to divided into smaller sentences and refer them as is. An example is: "The TACs move centripetally to the centre of the cornea in the basal layer of the corneal epithelium and also replenish cells in the overlying suprabasal layers. According to this limbal epithelial stem cell (LESC) hypothesis the LESCs maintain the corneal epithelium during normal homeostasis and become more active to repair significant wounds." This can be written as: "The TACs move centripetally to the centre of the cornea in the basal layer of the corneal epithelium and also replenish cells in the overlying suprabasal layers. The limbal epithelial stem cell (LESC) hypothesis conjectures that the LESCs maintain the corneal epithelium during normal homeostasis and become more active to repair significant wounds." "Several types of evidence are inconsistent with maintaining the corneal epithelium completely without stem cells so we reject this possibility" Rejection is a rather strong word. Authors should rephrase the sentence to emphasize that the hypothesis is inconsistent with the available evidence. There statement is valid without "so we reject this possibility" as well. Authors should lightly edit the manuscript to render it more scientific.

Response:

(1) We are pleased that the reviewer considers our manuscript to be a timely and pertinent review. While checking the text we did not notice any obvious unscientific wording. This is supported by the view of reviewer 505087, who wrote, "The language used is both scientific and easy to understand for a non expert reader." (see below). However, in response to the reviewer's comments about the writing style, we have made a number of changes to try to clarify the text. These changes have been highlighted in the revised text and include dividing some long sentences, dividing some long paragraphs, adding some extra text to explain some scientific points more clearly and some minor corrections to the text and Table 1. The reviewer specifically asks us to consider changing two sentences in the abstract so we have re-written part of the abstract. We have attempted to remove colloquialisms and examples of non-standard scientific writing in order to formalize the style and make it accessible to non-native English speakers. To try to ensure we had improved the written English sufficiently, a colleague checked the revised text for us. (Our colleague and all three authors are native English speakers with experience of writing scientific English.)

Reviewer 00505250**Comments:**

West and colleagues provide an excellent informative review on corneal stem cells and I would recommend publication in its current form.

Response:

(1) We are pleased that the reviewer considers our manuscript to be suitable for publication and thank them for their supportive comments. No changes were required.

Reviewer 00505209**Comments:**

This is an interesting review of two alternative stem cell hypotheses for adult corneal epithelial maintenance. I consider this study to have excellent data, and I commend it to EiC for publication without changes.

Response:

(1) We are pleased that the reviewer considers our manuscript to be suitable for publication and thank them for their supportive comments. No changes were required.

Reviewer 00505087**Comments:**

It is a well written review attempting to analyze all the theories and alternative stem cell hypotheses proposed on adult corneal epithelial maintenance. Although it is not an original article I would recommend it for possible publication as a review. The language used is both scientific and easy to understand for a non expert reader. The studies mentioned in the manuscript are indeed the most valuable on the specific area. I would just advise the authors to create a table summarizing the most important findings of several studies on the three main hypotheses mentioned. That would make it easier for the reader to acquire basic knowledge and be able seek for additional information in the reference list.

Response:

(1) We are pleased that the reviewer considers our manuscript to be well-written, easy to understand and suitable for publication as a review. Hopefully, the changes we made in response to reviewer 753131 have improved the quality of English further. In response to the reviewer's comments about a summary table, we have made some corrections and other changes to Table 1 ("Evidence discriminating between alternative hypotheses") that make the evidence base for the hypotheses, and the differences between them, more explicit.

3 The references and typesetting have been corrected.

Reference 46 has no PubMed ID but I can provide a pdf. This can also be viewed at:
<http://abstracts.iovs.org/cgi/content/abstract/52/6/320?sid=3c511cb3-4386-48cc-aebb-cf8b6f5d74d5>

Thank you for the opportunity to publish our manuscript in the *World Journal of Stem Cells*.

Yours faithfully,



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