Format for ANSWERING REVIEWERS

December 23, 2013

Dear Editor,

Please find enclosed the edited manuscript in Word format (file name: 6796-review.doc).

Title: Mesenchymal stem cells: potential role in corneal wound repair and transplantation. A review

Author: Fei Li, Shao-zhen Zhao

Name of Journal: *World Journal of Stem Cells*

ESPS Manuscript NO: 6796

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

1 Format has been updated

2 Revision has been made according to the suggestions of the reviewer

Reviewer 00504835:

(1) It is known that MSCs could accelerate the neovascularization by secreting VEGF, especially in the ischemia tissues and tumors. On the contrary, MSCs are involved in the anti-angiogenesis effect in injured cornea and the expression of VEGF was decreased. This might be attributed to the high-level of thrombospondin-1(TSP-1) which has an inhibiting effect on VEGF.(Oh JY, Kim MK, Shin MS, Lee HJ, Ko JH, Wee WR, Lee JH. The anti-inflammatory and anti-angiogenic role of mesenchymal stem cells in corneal wound healing following chemical injury. Stem Cells 2008; 26:1047-1055.) In fact, the specific mechanism is not clear.

(2) P4:"Migrating to the damaged tissue is a prerequisite for MSCs to exert therapeutic effects in the target tissue." This sentence expressed wrongly. We have deleted it in revision.

(3) The language has been edited.

Reviwer 00742254:

(1) Heterogeneous bone marrow MSCs are involved with mixed MSCs subtypes and their phenotypes remain poorly described.

(2) The error of format of citations which were pointed out has been corrected.

(3) The grammatical errors have been corrected.

Reviwer 02398400:

(1) Under "Role and Mechanisms of MSCs in Corneal Wound Repair" the previous manuscrip stated that marrow-derived MSCs are one "major" cell population that participates in wound repair. This sentence was not accurate. "major" was deleted in the revision.

(2) In the cited reference Jia et al. Exp Eye Res 2012; 102:44-49, the previous manuscrip stated that "postoperative infusion of MSCs inhibited corneal allograft rejection and prolonged corneal graft survival, while preoperative infusion was ineffective." In the study，pre-operative administration of MSCs without a low dose CsA therapy was ineffective compared with control group. It did not accelerate graft rejection,

although the survival time did not prolong compared with postoperative MSC therapy alone and even vehicle treatment. According to the explantion of the author, infusion time of MSCs might be the major reason which influenced the MSCs role of immunosuppression and the survival time. The paper did not imply that MSCs were disadvantaged and even might exacerbate disease. But in other study about heart transplantation, MSCs therapy did accelerate graft rejection. We added the description of this limitation to the part of "MSCs, immune, solid organ transplantation", and the second paragraph.

(3) We added the part about influence of does of MSCs on solid transplantation in the revision.

(4) The language has been edited.

Reviewer 00631847:

(1) The language has been edited.

3 References and typesetting were corrected

Thank you again for publishing our manuscript in the *World Journal of Stem Cells*.

Sincerely yours,
Fei Li

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