

PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 67445

Title: Retina stem cells, hopes and obstacles.

Reviewer's code: 04047574

Position: Editorial Board

Academic degree: PharmD

Professional title: Academic Research, Director, Pharmacist, Professor, Senior Scientist

Reviewer's Country/Territory: Germany

Author's Country/Territory: Argentina

Manuscript submission date: 2021-04-28

Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-05-17 06:59

Reviewer performed review: 2021-05-25 10:09

Review time: 8 Days and 3 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



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SPECIFIC COMMENTS TO AUTHORS

Manuscript: Retina stem cells, hopes and obstacles. The manuscript has provided a descriptive approach to several possible treatment strategies for retina degeneration using different stem cells. The authors present the associated limitations as well as lack of evidence or studies. The manuscript is well written and instructive for a reader who wants to gain knowledge in the field. However, there are already published reviews that present the existing literature background in the field (e.g., Singh et al. 2019, Retinal stem cell transplantation: Balancing safety and potential). To avoid overlapping with the already published manuscript and make this manuscript original, the reviewer strongly recommends delving into the role of miRNA and lincRNA as future molecular targets since this topic is little explored and only mention in this manuscript. The abstract summarized the review; nevertheless, the aim of the publication is completely missing. To provide the reader a better overview of the several stem cell types described and therapeutic efficacy archived with the associated reference should be summarized in a table. Additionally, several references are missing in the whole manuscript (e.g., "However, humans have about 1011 neurons with different morphologies and multiple functions, making it nearly impossible to regenerate the brain as a whole.") Minor comments: 1) Foreign words and only gene names should always be in italic (e.g., *in vivo*, *in vitro*, *et al.*) 2) There is inconsistency in the way of writing some abbreviations in the manuscript (e.g., SOX2, Sox2, SOX-2) 3) Abbreviation of BMP was clarified in the manuscript after the first used. 4) Several abbreviations used were not clarified (e.g., RPE and PHRs) or clarified twice (e.g., IL-6) 5) Several typos' mistakes (e.g., double spaces, double commas, missing period at the end of the sentence)

PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 67445

Title: Retina stem cells, hopes and obstacles.

Reviewer's code: 03947786

Position: Editorial Board

Academic degree: MD, PhD

Professional title: Assistant Professor

Reviewer's Country/Territory: China

Author's Country/Territory: Argentina

Manuscript submission date: 2021-04-28

Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-05-16 11:53

Reviewer performed review: 2021-05-26 07:25

Review time: 9 Days and 19 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



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SPECIFIC COMMENTS TO AUTHORS

In this review, the authors summarize the current findings of retina stem cells, including transplantation of stem cells into the eye to replace lost cells of retinal degeneration. Although this manuscript is interesting and well-documented, there are several issues that should be addressed in a revised manuscript. Comments: 1. The article reviewed the overview of stem cells, molecular regulation of stem cells, regeneration in the retina, different sources of retina stem cells and their potential risk. Thus, the reviewer thinks that the authors need to take an effort to improve logic and fluency in the manuscript. For example, the 'INTRODUCTION' and 'Overview and Types of Stem Cells' sections are not necessary, or these content can be briefly summarized into the 'Preface'. Additionally, the reviewer suggests the authors may re-organize sections into the following subheadings: • Retinal Degeneration and Treatment • Stem Cells Therapy and Neural Regeneration • Stem Cells in Retinal Degeneration: Current Approaches • Therapeutic Efficacy and Mechanisms of Different Retina Stem Cells • Conclusions 2. A table used to briefly summarize the interventions of RSCs derived from different sources (RPCs, ESCs, PSCs, iPSCs, and MSCs, etc.) for treating retinal degeneration would be more helpful, especially including clinical trials. 3. The "Conclusion" section may be revised with some efforts. Please do not use subheading, but provide perspective or insights, and the content of 'The pros and cons of current strategies for transplantation of SC in the retina' summarized into several points would be better. 4. Finally, if the Figures used or edited in this manuscript have been published elsewhere, the authors should obtain the permissions and correctly indicating the reference source and copyrights. Additionally, Figure 4 was not cited in the text.