

PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 49995

Title: Sphere-forming corneal cells repopulate dystrophic keratoconic stroma:
Implications for potential therapy

Reviewer's code: 02728252

Position: Editorial Board

Academic degree: PhD

Professional title: Professor

Reviewer's country: Egypt

Author's country: New Zealand

Reviewer chosen by: Li-Jun Cui (Quit in 2019)

Reviewer accepted review: 2019-06-29 07:10

Reviewer performed review: 2019-06-29 11:37

Review time: 4 Hours

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input checked="" type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input checked="" type="checkbox"/> Grade B: Very good	<input type="checkbox"/> Grade B: Minor language	(High priority)	<input checked="" type="checkbox"/> Anonymous
<input type="checkbox"/> Grade C: Good	polishing	<input checked="" type="checkbox"/> Accept	<input type="checkbox"/> Onymous
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade C: A great deal of	(General priority)	Peer-reviewer's expertise on the
<input type="checkbox"/> Grade E: Do not	language polishing	<input type="checkbox"/> Minor revision	topic of the manuscript:
publish	<input type="checkbox"/> Grade D: Rejection	<input type="checkbox"/> Major revision	<input type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input checked="" type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS



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It is well performed basic study as the authors reported that cells from implanted stem cell-enriched spheres can repopulate a keratoconic corneal stromal surface in a directed manner and exhibit migratory stromal cell phenotypes. The introduction section is well written and the rational of the study is sound. The study design is appropriate and the results and conclusion are indicative and consistent with the aim.

INITIAL REVIEW OF THE MANUSCRIPT

Google Search:

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ No

BPG Search:

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ No

PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 49995

Title: Sphere-forming corneal cells repopulate dystrophic keratoconic stroma:
Implications for potential therapy

Reviewer's code: 03976790

Position: Editorial Board

Academic degree: DSc, PhD

Professional title: Full Professor

Reviewer's country: France

Author's country: New Zealand

Reviewer chosen by: Li-Jun Cui (Quit in 2019)

Reviewer accepted review: 2019-06-29 09:21

Reviewer performed review: 2019-07-07 07:53

Review time: 7 Days and 22 Hours

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input checked="" type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input checked="" type="checkbox"/> Grade B: Very good	<input type="checkbox"/> Grade B: Minor language	(High priority)	<input checked="" type="checkbox"/> Anonymous
<input type="checkbox"/> Grade C: Good	polishing	<input type="checkbox"/> Accept	<input type="checkbox"/> Onymous
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade C: A great deal of	(General priority)	Peer-reviewer's expertise on the
<input type="checkbox"/> Grade E: Do not	language polishing	<input checked="" type="checkbox"/> Minor revision	topic of the manuscript:
publish	<input type="checkbox"/> Grade D: Rejection	<input type="checkbox"/> Major revision	<input type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input checked="" type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

Comments on the manuscript: "Sphere-forming corneal cells repopulate dystrophic keratoconic stroma: Implications for potential therapy" "Keratoconus is a degenerative corneal disease characterised by aberrant cell behaviour and loss of matrix that can result in vision loss". In this manuscript the author relate a study concerning the use of cells extracted from peripheral corneas forming stem cell-enriched spheres, in order to verify their potential to repair keratoconic tissue. They used stem cell-enriched spheres which were implanted in section of keratoconic tissue in vitro. They also used sections of normal tissues as controls. The study is well done with a lot of results, the manuscript well written, quality of figures are is good. Consents have been provided to take human samples. Nevertheless, I have some remarks about this manuscript. p. 8: Petri dish (not "petri") p. 10: Material and methods. The authors used several primary antibodies in order to visualize different markers of the cells. They used indirect immunofluorescence with a second antibody giving a specific staining. Results can be appreciated on the figures. Please specify which secondary antibody is specifically assigned to the primary antibody. p. 14: Results. - Repopulation of keratoconic tissue surface: there are a lot of results, so a table summarizing these results could be useful for the reader P. 18 to 27: Discussion. The discussion is very long with sometimes very long sentences, and could be shortened. References: I did not find references 32, 35, 36, 37 in the text. Please check the references.

INITIAL REVIEW OF THE MANUSCRIPT

Google Search:

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ No



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BPG Search:

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ No

PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 49995

Title: Sphere-forming corneal cells repopulate dystrophic keratoconic stroma:
Implications for potential therapy

Reviewer's code: 00410685

Position: Editorial Board

Academic degree: DPhil, MD, PhD

Professional title: Associate Professor

Reviewer's country: Italy

Author's country: New Zealand

Reviewer chosen by: Li-Jun Cui (Quit in 2019)

Reviewer accepted review: 2019-07-01 07:36

Reviewer performed review: 2019-07-09 09:01

Review time: 8 Days and 1 Hour

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input checked="" type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input type="checkbox"/> Grade B: Very good	<input type="checkbox"/> Grade B: Minor language	(High priority)	<input checked="" type="checkbox"/> Anonymous
<input checked="" type="checkbox"/> Grade C: Good	polishing	<input type="checkbox"/> Accept	<input type="checkbox"/> Onymous
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade C: A great deal of	(General priority)	Peer-reviewer's expertise on the
<input type="checkbox"/> Grade E: Do not	language polishing	<input type="checkbox"/> Minor revision	topic of the manuscript:
publish	<input type="checkbox"/> Grade D: Rejection	<input checked="" type="checkbox"/> Major revision	<input type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input checked="" type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

The paper describes the repopulation of from healthy donors and keratoconic corneal tissue from stem cells derived from peripheral corneas. The study is of relevance in the field as it investigates keratoconic tissue samples but is rather preliminary in its finding and descriptive, with only PCR analysis that present with quantitative evaluation of gene expression data. All IF stainings are suggestive but the lack of quantitative data leaves the reader with a suspended judgment on the significance of the conclusion that suggest no obvious difference among the different matrix surfaces for sphere adherence and proliferation. The conclusion that there is no obvious difference between normal and keratoconic stroma is therefore not yet fully justified as it should rely on quantitative data and not only on descriptive images that can suffer of an operator-dependent bias. Major: Page 13: Cells were seen to have migrated radially in all directions from the centre of spheres as early as Day 1. Page 14: At all three time points, labelling of ABCB5 appeared to be concentrated within spheres and not outside (Figure 3a-c, red) – indicating presence of stem cells within spheres alone Page 16: The extent of cell migration from the centre of spheres increased from Day 3 to Day 7 in 11/16 implanted spheres. Page 17: Cells within implanted spheres, as well as cells adjacent to but outside of the sphere (Figure 6c-d) stained positively for proliferation marker EdU at Day 10. Please quantify the data reported by image analysis and include more data in order to increase confidence on the relevance of the data. Minor. Being a key issue for future development in the field, if possible, can the author discuss and/or speculate more on the current status of the research on signaling molecules that might be required to direct differentiation of spheres?

INITIAL REVIEW OF THE MANUSCRIPT

Google Search:

[] The same title



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☐ Duplicate publication

☐ Plagiarism

☒ No

BPG Search:

☐ The same title

☐ Duplicate publication

☐ Plagiarism

☒ No

PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 49995

Title: Sphere-forming corneal cells repopulate dystrophic keratoconic stroma:
Implications for potential therapy

Reviewer's code: 02467578

Position: Editorial Board

Academic degree: PhD

Professional title: Director, Postdoc, Professor, Teacher

Reviewer's country: China

Author's country: New Zealand

Reviewer chosen by: Li-Jun Cui (Quit in 2019)

Reviewer accepted review: 2019-07-09 00:54

Reviewer performed review: 2019-07-11 09:42

Review time: 2 Days and 8 Hours

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input type="checkbox"/> Grade B: Very good	<input checked="" type="checkbox"/> Grade B: Minor language	(High priority)	<input checked="" type="checkbox"/> Anonymous
<input checked="" type="checkbox"/> Grade C: Good	polishing	<input type="checkbox"/> Accept	<input type="checkbox"/> Onymous
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade C: A great deal of	(General priority)	Peer-reviewer's expertise on the
<input type="checkbox"/> Grade E: Do not	language polishing	<input checked="" type="checkbox"/> Minor revision	topic of the manuscript:
publish	<input type="checkbox"/> Grade D: Rejection	<input type="checkbox"/> Major revision	<input type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input checked="" type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

The present manuscript submitted by Wadhwa H et al., was highlighted on sphere-forming corneal cells repopulate dystrophic keratoconic stroma as implications for potential therapy. It is very interesting on the potential ameliorated on the dystrophic keratoconic. 1. Please provided the No. of approved certificate by ethics committee. 2. The authors designed the different time points, please provided the rational cause. 3. The discussion should be concentrated on the results. 4. The present conclusion should be revised in accordance with the results.

INITIAL REVIEW OF THE MANUSCRIPT

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BPG Search:

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- ☐ No