



PEER-REVIEW REPORT

Name of journal: *World Journal of Stem Cells*

Manuscript NO: 82365

Title: Disease modeling of desmosome-related cardiomyopathy using induced pluripotent stem cell-derived cardiomyocytes

Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 03494848

Position: Editorial Board

Academic degree: BSc, MSc, PhD

Professional title: Associate Professor, Senior Researcher

Reviewer's Country/Territory: Spain

Author's Country/Territory: Japan

Manuscript submission date: 2022-12-16

Reviewer chosen by: AI Technique

Reviewer accepted review: 2023-01-10 11:13

Reviewer performed review: 2023-01-10 11:26

Review time: 1 Hour

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 Grade E: Do not publish
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input checked="" type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
Creativity or innovation of this manuscript	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input checked="" type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No creativity or innovation



Scientific significance of the conclusion in this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No scientific significance
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 checked="" type="checkbox"/> Minor revision <input 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

SPECIFIC COMMENTS TO AUTHORS

Authors wrote a revision focused on iPSc models for desmosome-related cardiomyopathies. Some points should be clarified: 1.- please could clarify if manuscript is focused on ARVD, ARVC or ACM, or all them. 2.- authors focused manuscript on PKP2, main desmosomal gene associated with ACM. What about other desmosomal genes related to ACM (at least DSG2, DSP, and DSC2). 3.- Please include data or opinion about potential clinical translation of advances achieved using these models.



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Title: Disease modeling of desmosome-related cardiomyopathy using induced pluripotent stem cell-derived cardiomyocytes

Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05847926

Position: Peer Reviewer

Academic degree: MD

Professional title: Associate Professor

Reviewer's Country/Territory: China

Author's Country/Territory: Japan

Manuscript submission date: 2022-12-16

Reviewer chosen by: AI Technique

Reviewer accepted review: 2023-01-28 02:42

Reviewer performed review: 2023-02-01 03:27

Review time: 4 Days

Scientific quality	<input checked="" type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
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Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input 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

SPECIFIC COMMENTS TO AUTHORS

This manuscript reviewed the recent advances in disease modeling of desmosome-related cardiomyopathy caused by gene mutations using induced pluripotent stem cell-derived cardiomyocytes. And the authors try to establish a human disease model that recapitulates reduced contractility and impaired desmosome assembly and provided a convenient cellular platform for therapeutic screening to examine upstream molecular targets of desmosome-related cardiomyopathy. However, desmosome protein is a kind of myocardial structure protein, although the experiments achieved gene repair at the cellular level , and promote cardiac cell function recovery, but compared with myocardial secretory proteins, in vivo experiment, myocardial structural protein modification is difficult to reach effective structural and functional recovery. Whether the author can do further elaboration on this issue.