

## PEER-REVIEW REPORT

**Name of journal:** *World Journal of Clinical Cases*

**Manuscript NO:** 77512

**Title:** Human-induced pluripotent stem cell-atrial-specific cardiomyocytes and atrial fibrillation

**Provenance and peer review:** Invited Manuscript; Externally peer reviewed

**Peer-review model:** Single blind

**Reviewer's code:** 04122814

**Position:** Peer Reviewer

**Academic degree:** MD

**Professional title:** Doctor

**Reviewer's Country/Territory:** Japan

**Author's Country/Territory:** Thailand

**Manuscript submission date:** 2022-05-04

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2022-05-09 23:48

**Reviewer performed review:** 2022-05-24 00:57

**Review time:** 14 Days and 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 Grade E: Do not publish
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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No

<b>Peer-reviewer statements</b>	Peer-Review: [ <input checked="" type="radio"/> ] Anonymous [ <input type="radio"/> ] Onymous Conflicts-of-Interest: [ <input type="radio"/> ] Yes [ <input checked="" type="radio"/> ] No
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## **SPECIFIC COMMENTS TO AUTHORS**

The authors comprehensively included the recent studies regarding hiPSC-aCMs differentiation, maturation, and focused on their application towards a personalized approach to the pharmacologic therapy of atrial fibrillation. This well-written review will be helpful for readers to understand the latest findings regarding regenerative medicine for the treatment of atrial fibrillation. My minor comments are as follows (1-3). (1) Some readers (including me) may not be familiar with IKACH, IK1, IKs, IKr, and INa. A figure explaining these action potentials may be helpful to understand them like Figure 1 in reference [60] and Figure 1B in reference [61]. (2) Please use abbreviations properly. For example, I think that APD, APs and iCell etc. were not defined. "sarcolipin" in page 13 was already defined as "SLN" in page 8. List of abbreviations might be helpful. (3) I feel that it would be better that the study by Benzoni et al [63] is included in the paragraph of "Personalized regenerative medicine for AF". On the other hand, is the study by Xie et al [72] using rat aCMs related with "Personalized regenerative medicine for AF"? The study by Gharanei et al [5] could also be included in the paragraph of "Isolation of hiPSC-aCMs".

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**Reviewer's code:** 05189761

**Position:** Peer Reviewer

**Academic degree:** FACP, MBBS, MD

**Professional title:** Assistant Professor, Research Fellow, Staff Physician

**Reviewer's Country/Territory:** United States

**Author's Country/Territory:** Thailand

**Manuscript submission date:** 2022-05-04

**Reviewer chosen by:** AI Technique

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**Review time:** 21 Hours

<b>Scientific quality</b>	<input type="checkbox"/> Grade A: Excellent <input checked="" 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
<b>Language quality</b>	<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
<b>Conclusion</b>	<input type="checkbox"/> Accept (High priority) <input checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Re-review</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No



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<b>Peer-reviewer statements</b>	Peer-Review: [ <input checked="" type="radio"/> ] Anonymous [ <input type="radio"/> ] Onymous Conflicts-of-Interest: [ <input type="radio"/> ] Yes [ <input checked="" type="radio"/> ] No
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### **SPECIFIC COMMENTS TO AUTHORS**

In this extensive review authors have summarized the implications of Human-Induced Pluripotent Stem Cell-Atrial Specific Cardiomyocytes (hiPSC-aCMs) and Atrial Fibrillation. Their work is extensive and thorough. I recommend them for their work. I have no specific concerns. I congratulate them for their work. Minor recommendations: Would recommend to highlight the salient points from the mentioned studies in a table format.