

## PEER-REVIEW REPORT

**Name of journal:** *World Journal of Stem Cells*

**Manuscript NO:** 89192

**Title:** Human pluripotent stem cell-derived kidney organoids: Current progress and challenges

**Provenance and peer review:** Unsolicited manuscript; Externally peer reviewed

**Peer-review model:** Single blind

**Reviewer's code:** 06140863

**Position:** Peer Reviewer

**Academic degree:** PhD

**Professional title:** Academic Research, Assistant Professor, Research Scientist

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

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

**Manuscript submission date:** 2023-10-23

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2023-11-08 09:18

**Reviewer performed review:** 2023-11-17 12:40

**Review time:** 9 Days and 3 Hours

Scientific quality	<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 Grade E: Do not publish
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
Creativity or innovation 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 creativity or innovation

<b>Scientific significance of the conclusion in this manuscript</b>	<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
<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 type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Re-review</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Peer-reviewer statements</b>	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

The authors have developed a well-constructed manuscript in the context of Human Pluripotent Stem Cell (hPSC)-derived kidney organoids. The manuscript's development is acceptable, with a good level of detail and a proper structure and coherence. I commend the authors for an excellent review of the paradigm. However, in order to enhance the scientific quality of the manuscript, I suggest the following corrections: I believe that the structure of the introduction could be improved, and there could be more emphasis on whether the potential uses of organoids focus on End-Stage Renal Disease (ESRD) patients (with the possibility of autotransplantation) or if they could also improve Chronic Kidney Disease (CKD) treatment, as it is not entirely clear. Furthermore, it could be supported with data illustrating the need for the treatment of patients with renal disease, including incidence, prevalence, and its evolution over time. I consider that the last section (future direction) could be enhanced. Firstly, consider creating a specific subsection on strengths and weaknesses of current experimental models. Secondly, delve deeper into the molecular biology aspects that are deemed relevant for future research, as well as the priorities in overcoming the problems

described in the weaknesses subsection. Kind regards.