# PEER-REVIEW REPORT

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

**Manuscript NO:** 64368

**Title:** Recent trends in stem cell-based therapies and applications of artificial intelligence in regenerative medicine

**Reviewer's code:** 03550401

**Position:** Editorial Board

**Academic degree:** MD, PhD

**Professional title:** Professor

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

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

**Manuscript submission date:** 2021-02-16

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2021-02-16 09:00

**Reviewer performed review:** 2021-02-28 12:06

**Review time:** 12 Days and 3 Hours

| Scientific quality | [  ] Grade A: Excellent   [ Y] Grade B: Very good   [  ] Grade C: Good [  ] Grade D: Fair   [  ] Grade E: Do not publish |
|---|---|
| Language quality | [  ] Grade A: Priority publishing   [ Y] Grade B: Minor language polishing [  ] Grade C: A great deal of language polishing   [  ] Grade D: Rejection |
| Conclusion | [  ] Accept (High priority)   [  ] Accept (General priority) [ Y] Minor revision   [  ] Major revision   [  ] Rejection |
| Re-review | [ Y] Yes   [  ] No |
| Peer-reviewer statements | Peer-Review: [ Y] Anonymous   [  ] Onymous Conflicts-of-Interest: [  ] Yes   [ Y] No |

**SPECIFIC COMMENTS TO AUTHORS**

Mukherjee et al have reviewed two hot topics of regenerative medicine: stem cell-based therapies and artificial intelligence algorithms in stem cell-based therapies. The author analyzed in detail some important types of stem cells in clinical treatment, including embryonic stem cells, induced pluripotent stem cells (iPSCs), induced tissue specific stem cells (iTS), and adult stem cells (ASCs). And then, the author focused on the clinical treatment of MSCs and the application of artificial intelligence in iPSC, highlighting their limitations and future prospects. However, the manuscript required minor language and grammar corrections. I suggest, if possible, and where available, the following data:   1. For therapeutic use of stem cells in the second part of the review, is it possible to make a unified summary table which lists the discovery time and source, advantages and disadvantages, current clinical applications and prospects of the various types of stem cells?   2. Does AI only play a role in the cell culture stage of stem cell-based therapies? Are there any more available aspects of AI in stem cell-based therapies: such as evaluation of efficacy and disease prognosis?   3. A suggestion: "2.4 Fetal stem cells" of the review can be combined with "2.5 Adult stem cells (ASCs)" to avoid redundancy.   4. Having two figure 3.