



### PEER-REVIEW REPORT

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

**Manuscript NO:** 57914

**Title:** Pancreatic  $\beta$  cell regeneration induced by clinical and preclinical agents

**Reviewer's code:** 03814168

**Position:** Editorial Board

**Academic degree:** PhD

**Professional title:** Assistant Professor

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

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

**Manuscript submission date:** 2020-06-29

**Reviewer chosen by:** Ya-Juan Ma

**Reviewer accepted review:** 2020-09-24 06:39

**Reviewer performed review:** 2020-09-29 05:47

**Review time:** 4 Days and 23 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 Grade E: Do not publish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 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 type="checkbox"/> Anonymous <input checked="" type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



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#### **SPECIFIC COMMENTS TO AUTHORS**

The paper submitted by Wei et al., is very well written, clear and easy to understand. The manuscript can be accepted with minor revisions. The authors need to incorporate a table for molecules/ clinical agents that are reported in this manuscript.



## PEER-REVIEW REPORT

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

**Manuscript NO:** 57914

**Title:** Pancreatic  $\beta$  cell regeneration induced by clinical and preclinical agents

**Reviewer's code:** 04023792

**Position:** Peer Reviewer

**Academic degree:** DVM, PhD

**Professional title:** Professor

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

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

**Manuscript submission date:** 2020-06-29

**Reviewer chosen by:** Ya-Juan Ma

**Reviewer accepted review:** 2020-09-22 08:30

**Reviewer performed review:** 2020-09-30 20:37

**Review time:** 8 Days and 12 Hours

<b>Scientific quality</b>	<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
<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 type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Re-review</b>	<input checked="" type="checkbox"/> Yes <input 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



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#### **SPECIFIC COMMENTS TO AUTHORS**

In this review, Wang et al. summarizes the clinical and preclinical agents used in different approaches for  $\beta$  cell regeneration and highlighted the challenges and future perspectives. There are some major points need to be addressed: 1) The authors should differentiate between beta cell regeneration in T1D and T2D. Therefore, it is better to have two new sections focusing on “beta cell regeneration in T1D” and “beta cell regeneration in T2D”. 2) In the “PROMOTION OF STEM CELL DIFFERENTIATION” section, the authors only cited old protocol for beta cell differentiation, which produce non-functional beta cells (D'Amour et al. 2006). However, there are several recent protocols published in 2019 and 2020. The new protocols generate functional beta cells. 3) The authors neglected the progenitors derived from hPSCs, which are currently in clinical trials to treat T1D patients. Also, it has been recently reported generation of hPSC-derived pancreatic progenitors lacking PDX1 and have mesenchymal phenotypes. They should add this article and comment on it (Memon et al. 2020; PMID: 32857429). 4) The authors should add a Table with citations to summarize the types pancreatic progenitors that can generate beta cells in vivo or in vitro (ductal, acinar, hPSCs,...etc). 5) Another table to summarize the factors that are used in the clinical or the pre-clinical studies should be provided. 6) The manuscript needs a grammar correction.