

PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 62548

Title: Different kinds of stem cells in the development of SARS-CoV-2 treatments

Reviewer's code: 00069192

Position: Peer Reviewer

Academic degree: MD

Professional title: Chief Physician

Reviewer's Country/Territory: China

Author's Country/Territory: Mexico

Manuscript submission date: 2021-01-16

Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-01-17 23:45

Reviewer performed review: 2021-01-22 09:08

Review time: 4 Days and 9 Hours

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 Grade E: Do not publish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 checked="" type="checkbox"/> Grade A: Priority publishing <input 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 checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input type="checkbox"/> Yes <input checked="" 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



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It is an interesting and meaningful review. The viral pandemic, named as COVID-19 (SARS-CoV-2), has affected the entire world in a short time, which currently has approximately taken the life of one million persons in more than 200 countries. Now the disease still lack specific medicine in the clinic. In this manuscript, author reviewed different kinds of stem cells in the development of SARS-CoV-2 treatments. 1. Could author review if there are some MSCs used in mechanism research of SARS-CoV-2. 2. The Ethical Risk of MSCs used in the clinic need to be discussed.

PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 62548

Title: Different kinds of stem cells in the development of SARS-CoV-2 treatments

Reviewer's code: 05432362

Position: Peer Reviewer

Academic degree: PhD

Professional title: Professor

Reviewer's Country/Territory: Japan

Author's Country/Territory: Mexico

Manuscript submission date: 2021-01-16

Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-01-17 13:16

Reviewer performed review: 2021-01-22 14:47

Review time: 5 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 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



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To Authors: After careful review of this manuscript, I found that this work possesses a clinical value. However, some major issues must be solved as follows:

- The manuscript should be revised for linguistic errors.
- Wrong use of paragraphing is common in this manuscript. Authors may seek the help of a native speaker of English Language.
- Also, the presentation of the article should be more attentive. There are disconnections.
- Classification of stem cells, especially according to their potency needs to be presented as a figure.
- Clinical trials of exosomes and stem cells need to be presented in a table separately.
- Please, double-check the reference list with in-text citations, sometimes not matched
- Please tabulate the pros and cons of stem cells in ttt of COVID-19
- For sure exosomes are considered to be safe candidates in comparison with stem cell therapy please discuss this situation

PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 62548

Title: Different kinds of stem cells in the development of SARS-CoV-2 treatments

Reviewer's code: 05702942

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor

Reviewer's Country/Territory: United States

Author's Country/Territory: Mexico

Manuscript submission date: 2021-01-16

Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-01-16 23:46

Reviewer performed review: 2021-02-01 18:47

Review time: 15 Days and 19 Hours

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 type="checkbox"/> Minor revision <input checked="" 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

The authors have presented a manuscript titled “Different kinds of stem cells used in SARS-COV2 treatments” reviewing the various types of cell models necessary for the study of potential models for SARS-COV2 infection and its prospective treatment. The authors have put great effort into the manuscript. However, the application of Stem cells exosomes for treatment of SARS-COV-2 infected patients. Authors have specifically researched patients with acute lung injury (ALI) and subsequent pulmonary complications. The efforts need more inputs as specifically for the possible pathological effects during MSCs application. Also, authors are suggested to find more information about the research articles rather than summarising the information from some existent review articles such as Ref no.2 as mentioned below. Some references with the similar iteration of the documentation in the manuscript are: 1. <https://doi.org/10.1016/j.scr.2020.101859> 2. <https://doi.org/10.1186/s13287-020-01699-3> 3. <https://doi.org/10.1038/s41536-020-00105-z> 4. <https://doi.org/10.1038/s41586-020-2901-9> Conclusively, the work needs more findings from the covid-19 research before being considered for publication. Possible revision work 1) The title “Different kinds of stem cells in the development of SARS-CoV-2 treatments” does not seems to be apt; authors can consider revising it to depict and encompass the entire content of the manuscript. 2) In the section “ESCs AND COVID-19 INFECTION MODEL”, it would be better to put a table with a list of existing models of COVID-19, its advantages and disadvantages. 3) In the section “PSCs AND ORGANOIDs FOR SARS-CoV-2”, it would be better to even mention the shortcomings of organoid models. Also, authors need to include more research articles in this section. A few examples: <https://doi.org/10.1101/2020.10.17.344002> <https://doi.org/10.1016/j.cell.2020.04.004> 4) In the section “SCs AND EXOSOMES”, it would be better to mention the underlying mechanism for the functionality of exosomes as a potential vaccine candidate”. A paragraph emphasizing on the potential of SCs-exosomes as a delivery carrier can be



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added, citing a few references. 5) In the section “ARTIFICIALLY iPSCs IN COVID-19”, authors should elaborate briefly about the different machine learning models used in the investigation, and their shortcomings. The potential risk of comparing AI-based models and the real experimental models should be emphasized. Following papers may be cited to enrich this part: Authors can demarcate their opinion about prediction and classification-based models with potential application in COVID-19.
<https://doi.org/10.1016/j.molmed.2020.04.007>

<https://doi.org/10.2174/1381612826666200515131245> The sub-title “ARTIFICIALLY iPSCs IN COVID-19” does not depict the actual content; authors can consider revising it.
6) The conclusion has been written vaguely; authors can consider to revise it along with addition of FUTURE PERSPECTIVE.

RE-REVIEW REPORT OF REVISED MANUSCRIPT

Name of journal: World Journal of Stem Cells

Manuscript NO: 62548

Title: Different kinds of stem cells in the development of SARS-CoV-2 treatments

Reviewer's code: 05432362

Position: Peer Reviewer

Academic degree: PhD

Professional title: Professor

Reviewer's Country/Territory: Japan

Author's Country/Territory: Mexico

Manuscript submission date: 2021-01-16

Reviewer chosen by: Le Zhang

Reviewer accepted review: 2021-03-04 10:05

Reviewer performed review: 2021-03-05 06:22

Review time: 20 Hours

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 checked="" type="checkbox"/> Grade A: Priority publishing <input 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 checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Peer-reviewer statements	Peer-Review: <input type="checkbox"/> Anonymous <input checked="" type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

The authors have successfully addressed the concerns raised.