

## PEER-REVIEW REPORT

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

**Manuscript NO:** 64222

**Title:** Heat shock protein 20 promotes SIRT1-dependent cellular proliferation in induced pluripotent stem cell

**Reviewer's code:** 05863309

**Position:** Peer Reviewer

**Academic degree:** MD

**Professional title:** Doctor

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

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

**Manuscript submission date:** 2021-02-12

**Reviewer chosen by:** Lian-Sheng Ma

**Reviewer accepted review:** 2021-02-12 11:02

**Reviewer performed review:** 2021-02-13 07:35

**Review time:** 20 Hours

<b>Scientific quality</b>	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input checked="" type="checkbox"/> Grade E: Do not publish
<b>Language quality</b>	<input 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 checked="" 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 type="checkbox"/> Major revision <input checked="" 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**

This study lacks sufficient evidence to prove that HSP20 promotes cells growth via SIRT1. The author should utilized SIRT1 RNAi or inhibitor to treat HSP20 overexpressing cells. Meanwhile, this manuscript is badly written.

## PEER-REVIEW REPORT

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

**Manuscript NO:** 64222

**Title:** Heat shock protein 20 promotes SIRT1-dependent cellular proliferation in induced pluripotent stem cell

**Reviewer's code:** 02728252

**Position:** Editorial Board

**Academic degree:** PhD

**Professional title:** Professor

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

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

**Manuscript submission date:** 2021-02-12

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2021-02-12 02:37

**Reviewer performed review:** 2021-02-17 08:45

**Review time:** 5 Days and 6 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 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**

It is an interesting study exploring the role of heat shock protein 20 on cellular proliferation in induced pluripotent stem cells. The study has a rational and sound study design. The following should be considered when available: 1. As the authors used iPSCs in their experiments, they should give more consideration to this issue in the introduction section. Likely as how it is derived, their uses in regenerative medicine, blah, blah..... 2. The hypothesis of the study should also be considered at the end of the introduction section. 3. Statements of the ethical approval and checklist for reporting in-vitro studies should be added in the methodology section. 4. The authors mentioned that "SIRT1, a member of the sirtuin family of NAD-dependent deacetylase, is known to induce proliferation and inhibit apoptosis", why they didn't use certain markers for apoptosis in their study. 5. The abbreviation of Heat shock protein and Sirtuin-1 should be consistent throughout the manuscript (HSP/Hsp), and also for sirtuin(SIRT-1/Sirt-1). 6. How they obtain iPSC, purchased as a cell line or it was prepared inside their labs.

## PEER-REVIEW REPORT

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

**Manuscript NO:** 64222

**Title:** Heat shock protein 20 promotes SIRT1-dependent cellular proliferation in induced pluripotent stem cell

**Reviewer's code:** 03814201

**Position:** Editorial Board

**Academic degree:** PhD

**Professional title:** Associate Professor, Senior Researcher

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

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

**Manuscript submission date:** 2021-02-12

**Reviewer chosen by:** Lian-Sheng Ma

**Reviewer accepted review:** 2021-02-18 11:51

**Reviewer performed review:** 2021-03-04 08:55

**Review time:** 13 Days and 21 Hours

<b>Scientific quality</b>	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input checked="" 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

## **SPECIFIC COMMENTS TO AUTHORS**

Comments to Editor I recommend a major revision before accept. Comments to the Author In this manuscript, Ullah and colleagues investigated the effect of heat shock protein 20 (HSP20) on proliferation of human iPSCs. In their experiment, HSP20 was overexpressed in iPSCs and the results showed that the cell viability was significantly increased in the HSP20-overexpressing cells. They found that HSP20 acts in a SIRT1-dependent pathway to drive cellular proliferation. This is a very interesting study because the authors mentioned that HSP20 has been implicated in cellular proliferation but conflicting studies have shown that it can either promote or suppress proliferation. This manuscript is generally well-written and easy to follow. However, the paper suffers from some low-quality data and several issues need to be addressed. Major concerns: 1. Why did the authors choose iPSC as a cell model, because this kind of cell itself is a highly proliferative type of cell? 2. The cell morphology in figure 1B shows that iPSCs cells may differentiated after HSP20 expression. So, the state of pluripotency should be further identification. 3. What phenotype will appear if HSP20 was knock down in iPSCs? Minor concerns: 1. This manuscript is missing page and line numbers. 2. In figure2a, it is not clear about vertical axis. In addition, the pentagram should be replaced with a snowflake symbol. 3. The authors were also encouraged to check typos error (e.g., in fig1 and fig3, “ $\beta$ actine” should be “ $\beta$ -actin”).

## RE-REVIEW REPORT OF REVISED MANUSCRIPT

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

**Manuscript NO:** 64222

**Title:** Heat shock protein 20 promotes SIRT1-dependent cellular proliferation in induced pluripotent stem cell

**Reviewer's code:** 02728252

**Position:** Editorial Board

**Academic degree:** PhD

**Professional title:** Professor

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

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

**Manuscript submission date:** 2021-02-12

**Reviewer chosen by:** Han Zhang (Part-Time Editor)

**Reviewer accepted review:** 2021-03-30 08:34

**Reviewer performed review:** 2021-03-30 08:42

**Review time:** 1 Hour

<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>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



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No further comments



## RE-REVIEW REPORT OF REVISED MANUSCRIPT

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

**Manuscript NO:** 64222

**Title:** Heat shock protein 20 promotes SIRT1-dependent cellular proliferation in induced pluripotent stem cell

**Reviewer's code:** 03814201

**Position:** Editorial Board

**Academic degree:** PhD

**Professional title:** Associate Professor, Senior Researcher

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

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

**Manuscript submission date:** 2021-02-12

**Reviewer chosen by:** Han Zhang (Part-Time Editor)

**Reviewer accepted review:** 2021-03-29 05:37

**Reviewer performed review:** 2021-04-01 00:40

**Review time:** 2 Days and 19 Hours

<b>Scientific quality</b>	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input checked="" 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 type="checkbox"/> Major revision <input checked="" type="checkbox"/> Rejection
<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



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The responses by the authors are not satisfactory to me. They also did not added any supplement data.