



PEER-REVIEW REPORT

Name of journal: *World Journal of Diabetes*

Manuscript NO: 71980

Title: Roles of transient receptor potential channel 6 in glucose-induced cardiomyocyte injury

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 03976790

Position: Editor-in-Chief

Academic degree: DSc, PhD

Professional title: Emeritus Professor

Reviewer's Country/Territory: France

Author's Country/Territory: China

Manuscript submission date: 2021-10-02

Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-11-07 08:01

Reviewer performed review: 2021-11-12 14:16

Review time: 5 Days and 6 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 Grade E: Do not publish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 checked="" 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
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SPECIFIC COMMENTS TO AUTHORS

Comments on the manuscript “The roles of TRPC6 in glucose-induced cardiomyocyte injury” Diabetic cardiomyopathy is a complication of diabetes characterized by heart enlargement and failure. The aim of the work presented here was to explore whether TRPC6 which is a calcium channel linked to various cardiomyopathies affects cardiomyocyte apoptosis and proliferation inhibition in diabetic cardiomyopathy. This work brings interesting and useful results. However, it is necessary that the manuscript be improved before considering its publication. Here are a few remarks. Page 4, Experimental animals and protocol: “Modeling method: STZ solution with a concentration of 6.5 mg/ml was prepared with citric acid buffer”: specify the pH of the buffer. Page 8, cell culture: this paragraph is not clear. “...control group: a certain amount of mannitol was added to 5.5 mmol/L low-glucose medium to make the osmotic pressure same as that of the high-glucose group”: it is not clear, specify whether the osmolarity to be obtained is 33 mMol / L and what was the quantity of mannitol used or specify whether mannitol was added until the correct osmolarity was obtained. How was osmolarity measured? “High-glucose group (HG): a certain amount of glucose powder was added to the low-glucose medium to form a high-glucose medium with a concentration of 33 mmol/L;”: this part is not clear: what does "a certain amount of glucose" mean? See also the note above. Page 9, immunofluorescence: specify the characteristics of PBS (pH, osmolarity) Write “Then, the samples were washed with PBS solution three times” instead of “Then, the samples were washed with PBS solution three times” Page 10 “Anti-fluorescence quenching sealing agent was added”: what was this agent? Page 10, CCK-8 test: quickly describe the test. Page 11: “After the present



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time, the supernatant was aspirated and put into a centrifuge to centrifuge for about 5minutes”: give the centrifugation speed in number of g. Page 11, ROS detection: write “, and it can be freely penetrated the cell membrane” or “, and it can freely penetrate the cell membrane” instead of “, and it can be freely penetrate the cell Membrane” Page 12, Detection of apoptosis by flow cytometry: “The cells of each group were collected, resuspended in the culture medium, and centrifuged at 4°C for 5 min”: specify the centrifuge speed. Page 213, histological analysis: “Masson dye is one of the main methods to show the dyeing of fibers in tissue. Masson stains muscle fibers in red and collagen fiber in blue, which is mainly used to distinguish collagen fiber from muscle fiber”: in Masson's trichrome (not Masson's dye), fuchsin stains muscle fibers and certain other components red; aniline blue stains collagen blue. The nuclei are stained by hemalum. Specify the staining. “In histology, periodic acid schiff (PAS) staining is mainly used to detect glycogen or other polysaccharide substances, which makes glycogen and the neutral mucilage material red and the nucleus blue.”: nuclei are blue stained when the dye is hematoxylin. Specify. Page 14, Echocardiographic detection: write “Mice” instead of “mice”. “We removed the hair around the heart”: I guess it's in the heart region on the body? Specify. Page 20: write “western” instead of “weterm” Page 22write “Sonnevedl” instead of “Sonnevedl”. In the text, it is the reference 43, but in the list it is 44 “Gao et al found that AngII...” in the text it is the reference 44, but I didn't find it in the list. Page 26, conclusions: write “suggested” instead of “sugggested”.

References: references should be carefully checked by checking both the number given in the text and the reference in the list. Figures: in a general manner, I have had some difficulties to understand the figures. The figures need some explanations, the different pictures are presented but not explained and finally the figures are difficult to be understood. Exemple: Figure 2A: what are the differences between the two pictures? What does the graph on the right mean?



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Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05156586

Position: Editorial Board

Academic degree: PhD

Professional title: Assistant Professor

Reviewer's Country/Territory: South Korea

Author's Country/Territory: China

Manuscript submission date: 2021-10-02

Reviewer chosen by: Xin Liu (Online Science Editor)

Reviewer accepted review: 2021-12-21 05:35

Reviewer performed review: 2021-12-28 11:03

Review time: 7 Days and 5 Hours

Scientific quality	<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
Language quality	<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
Conclusion	<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
Re-review	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



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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
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SPECIFIC COMMENTS TO AUTHORS

This paper does not fit in WJSC. The role of WJSC is to provide research trend various fields of stem cells. However, this paper is not stem cell research. Let your choice of different journal for your great results.



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Title: Roles of transient receptor potential channel 6 in glucose-induced cardiomyocyte injury

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 02932516

Position: Peer Reviewer

Academic degree: PhD

Professional title: Senior Scientist

Reviewer's Country/Territory: India

Author's Country/Territory: China

Manuscript submission date: 2021-10-02

Reviewer chosen by: Xin Liu (Online Science Editor)

Reviewer accepted review: 2021-12-21 05:55

Reviewer performed review: 2022-01-15 07:25

Review time: 25 Days and 1 Hour

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
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
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Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No



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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
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SPECIFIC COMMENTS TO AUTHORS

The study by Jaing is to delineate the role of TRPC6 in the Diabetic cardiomyopathy. In addition, to study the involvement of TRC6 and P- CaMKII in cardiomyopathy. The study is interesting; however, the mechanism of TRC6 and CaMKII is not studied in-depth. The study by Xie et al. 2012 have shown that the TRC6 downregulation showed prevention of stress induced cardiac modelling. Further Anderson et al. 2011 also showed that increased expression of CaMKII showed cardiac hypertrophy. Figure 3A, the author showed a significant difference in the G1 cells; however, it is very clear on the increased G1 in DCM model. Figure 3B, whether the level of PCNA and Cyclin D normalized with GAPDH? Figure 4B, TRC6 Fluorescence is not clear, although the plot showed significant difference in DCM. Figure 8A, The level of p-CaMKII in western of all groups is not clear and acceptable, This should be repeated. Table 1, glucose level in 4 weeks showed a decreased trend in STZ? Not clear. The mechanism of TRC6 and CaMKII is not studied that would have provided more information. Moreover, there is TRC6 and PI3K involvement is there. Minor:



RE-REVIEW REPORT OF REVISED MANUSCRIPT

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Peer-review model: Single blind

Reviewer's code: 02932516

Position: Peer Reviewer

Academic degree: PhD

Professional title: Senior Scientist

Reviewer's Country/Territory: India

Author's Country/Territory: China

Manuscript submission date: 2021-10-02

Reviewer chosen by: Jia-Ru Fan

Reviewer accepted review: 2022-01-21 12:39

Reviewer performed review: 2022-01-27 12:33

Review time: 5 Days and 23 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
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 checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Peer-reviewer	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous



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statements

Conflicts-of-Interest: [] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

I went through the rebuttal letter of the revised manuscript by Jiang et al., and it looks OK. Language editing should be done.