

PEER-REVIEW REPORT

Name of journal: World Journal of Biological Chemistry

Manuscript NO: 41581

Title: Role of STIM1 in neurodegeneration

Reviewer's code: 03798488

Reviewer's country: Italy

Science editor: Fang-Fang Ji

Date sent for review: 2018-08-17

Date reviewed: 2018-08-20

Review time: 3 Days

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input checked="" type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input type="checkbox"/> Grade B: Very good	<input type="checkbox"/> Grade B: Minor language	(High priority)	<input checked="" type="checkbox"/> Anonymous
<input checked="" type="checkbox"/> Grade C: Good	polishing	<input type="checkbox"/> Accept	<input type="checkbox"/> Onymous
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade C: A great deal of	(General priority)	Peer-reviewer's expertise on the
<input type="checkbox"/> Grade E: Do not	language polishing	<input checked="" type="checkbox"/> Minor revision	topic of the manuscript:
publish	<input type="checkbox"/> Grade D: Rejection	<input type="checkbox"/> Major revision	<input type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input checked="" type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

In this manuscript, Carlos Pascual-Caro and colleagues investigate STIM1, an transmembrane protein endoplasmic reticulum with a key role in Ca²⁺ mobilization emphasizing the role in neurodegenerative diseases. I think that some adjustments are required to substantially improve the manuscript and make it acceptable for publication.

The following main points should be addressed: • Page 3 section “STIM1 AND CALCIUM MOBILIZATION”: lines 40-50 should be rewritten. Indeed, it is not clear how STIM1, transmembrane protein of the endoplasmic reticulum can increase the cytosol and/or the extracellular Ca^{2+} concentration. Explain better or integrate with the next paragraph; • Page 6 section “STIM1 IN NEURONAL CELL DEATH”: lines 134-136 it would be appropriate to extend the argument to ROS-induced ROS release. Moreover, it would be appropriate to discuss about the role of the mitochondrial permeability transition pore when the Ca^{2+} concentration suddenly increases in mitochondria; In addition, in my opinion the inclusion of some figures would make the reading of the review more engaging.

INITIAL REVIEW OF THE MANUSCRIPT

Google Search:

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ No

BPG Search:

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ No

PEER-REVIEW REPORT

Name of journal: World Journal of Biological Chemistry

Manuscript NO: 41581

Title: Role of STIM1 in neurodegeneration

Reviewer's code: 02620433

Reviewer's country: Russia

Science editor: Fang-Fang Ji

Date sent for review: 2018-09-03

Date reviewed: 2018-09-04

Review time: 1 Day

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input type="checkbox"/> Grade B: Very good	<input type="checkbox"/> Grade B: Minor language	(High priority)	<input type="checkbox"/> Anonymous
<input type="checkbox"/> Grade C: Good	polishing	<input type="checkbox"/> Accept	<input type="checkbox"/> Onymous
<input checked="" type="checkbox"/> Grade D: Fair	<input checked="" type="checkbox"/> Grade C: A great deal of	(General priority)	Peer-reviewer's expertise on the
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		<input type="checkbox"/> Rejection	<input checked="" type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

In the minireview "The role of STIM1 in neurodegeneration" by Pascual-Caro et al., an attempt to briefly summarize the data about the participation of STIM1 in neurodegeneration was undertaken. It should be mentioned that several "full-bodied" reviews addressing this problem in details appeared recently [1-5]. Although some of

them [1-2] appeared three years ago and are in open access, they are not mentioned by the authors. I understand that minireviews are very important publications, however, to my mind they should address either quite recent finding in the field or discuss the general problems, developments and prospects without going in very details which are already addressed in reviews. The manuscript presentation is completely different from that accepted in the journal. It should be formatted according the Guidelines for Manuscript Preparation and Submission: Minireviews. The language should be greatly improved. In the present form sometimes, it is difficult to understand the idea of the authors. I strongly recommend to seek a help of native English-speaking person or use language editing service. The lines 201-220 are not related to the topic of the manuscript. Conclusions should be rewritten, clearly stating the role of STIM1 in the neurodegeneration. The cartoon illustrating the STIM interactions would be very helpful for understanding these complicated processes. Minor points: The abbreviations in the abstract should be deciphered. The abbreviations in the main text should be used according to the guidelines. Some abbreviations are introduced just for the single use. 1. Moccia F, Zuccolo E, Soda T, Tanzi F, Guerra G, Mapelli L, Lodola F, D'Angelo E. Stim and Orai proteins in neuronal Ca(2+) signaling and excitability. *Front Cell Neurosci*. 2015 Apr 24;9:153. doi: 10.3389/fncel.2015.00153. eCollection 2015. 2. Kraft R. STIM and ORAI proteins in the nervous system. *Channels (Austin)*. 2015;9(5):245-52. doi: 10.1080/19336950.2015.1071747. 3. Popugaeva E, Bezprozvanny I. STIM proteins as regulators of neuronal store-operated calcium influx. *Neurodegener Dis Manag*. 2018 Feb;8(1):5-7. doi: 10.2217/nmt-2017-0053. 4. Secondo A, Bagetta G, Amantea D. On the Role of Store-Operated Calcium Entry in Acute and Chronic Neurodegenerative Diseases. *Front Mol Neurosci*. 2018 Mar 22;11:87. doi: 10.3389/fnmol.2018.00087. eCollection 2018. Review. 5. Wegierski T, Kuznicki J. Neuronal calcium signaling via store-operated channels in health and disease. *Cell Calcium*. 2018 Sep;74:102-111. doi:



**Baishideng
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Group**

7901 Stoneridge Drive, Suite 501,
Pleasanton, CA 94588, USA
Telephone: +1-925-223-8242
Fax: +1-925-223-8243
E-mail: bpgoffice@wjgnet.com
https:// www.wjgnet.com

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INITIAL REVIEW OF THE MANUSCRIPT

Google Search:

- ☐ The same title
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- ☐ Plagiarism
- ☐ [Y] No

BPG Search:

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- ☐ [Y] No