Jundishapur Journal of Microbiology
Volume 15 · Issue 8 · e129848

OPEN PEER REVIEW

In Vitro Evaluation of Antiviral Activity Effect of Selenium, *Bacillus clausii* Supernatant, and Their Combination on the Replication of Herpes Simplex Virus 1

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SUBMITTED	REVISED	ACCEPTED	DOI
19 Jul 2022	10 Aug 2022	10 Aug 2022	10.5812/jjm-129848

About this report

This open peer review (OPR) report shows the public comments made on this article during peer review, by the reviewers, the associate editor and the editor-in-chief, for every revision round, together with the authors' replies. Comments appear only with the consent of the people who wrote them. Reviewers who chose to sign their report are named; the others are shown as "Referee". Comments are edited for language only, and confidential remarks to the editors are not included.

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1 Original submission

1 comment · 1 Aug 2022

Referee 1 Reviewer

MAJOR REVISION 1 Aug 2022

The manuscript entitled “In Vitro Evaluation of Antiviral Activity of the Selenium, Bacillus Clausii Supernatant, and Combination of Both on the Replication of Herpes Simplex Virus” reports the findings of 2 putative anti-HSV compounds. The findings are interesting and relevant enough to deserve publication, but the manuscript needs extensive revision before it can be published.

1- Line 2 (title): The present manuscript title should be recast for clarity.
2- Line 30 (keywords): Replace “supernatant ” with “B. clausii supernatant ”.
3- Add a paragraph about the role of the UL 47 gene and its importance in the viral replication cycle in the introduction section.
4- More information about the site where the virus strain used was isolated, as well as the tests performed to identify the type of virus, can be given in the virus part of the methods section.
5- Lines 88, 99: Superscript “4”.
6- Why did the authors not perform a plaque reduction assay on Vero cells to confirm the TCID 50 result?
7- Line 151: Both concentrations are written as one.
8- Lines 167-168 and 172: Change UI 47 to “UL 47 ”.
9- The English language usage is poor, and the whole text needs a major revision by a native English speaker. There are many typos, including, but not limited to, the misspelled words in the text.
10- Given that you are going to suggest an antiviral, it is very important to have the SI index. It is better to calculate the two factors EC50 and CC50 and enter them together with the SI index in the text of the manuscript.
11- There are missing references throughout the work, for example in line 98 (titration of HSV in the Method section), p.16, lines 206 and 207, p.11.
12- Please cite 10.1002/iid3.667, 2022 for antiviral activity.
13- In the discussion section, the reason for choosing UL47 in your study among other genes should be explained.

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Revision 1

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Response to Review Comments

(Manuscript ID: 129848)

I am very much thankful to the reviewers for their deep and thorough review. I have revised my present manuscript in the light of their useful suggestions and comments. I hope my revision has improved the manuscript to a level of their satisfaction. Number wise answers to their specific comments/suggestions/queries are as follows.

Response to Reviewer #1 Comments

Comment 1- Line 2 (title): present manuscript title should be re-casted for clarity.
Response: We corrected title of the manuscript as you suggested.
Comment 2- Line 30 (keywords): “supernatant “replace with “B. clausii supernatant “
Response: We replace it as you suggested.
Comment 3- Add a paragraph about the role of the UL 47 gene and its importance in the viral replication cycle in the introduction section.
Response: we added a paragraph about the role of the UL 47 gene to the introduction section.
Comment 4- The site where the virus strain used is isolated, as well as the tests performed to identify the type of virus, more information can be given in the virus part in the methods section.
Response: We did not isolate the virus, but we received the confirmed virus (by culture and PCR) from Institute Pasteur of Iran. We add data to the cell line and virus section of method.
Comment 5- Line 88, 99: Superscript “4”.
Response: We corrected them as you suggested.
Comment 6- Why did the authors not perform a plaque reduction assay on Vero cells to confirm the TCID 50 result?
Response: We used a molecular test (real-time PCR) to confirm $TCID_{50}$ results.
Comment 7- Line 151: Both concentrations are written as one
Response: We corrected it as you suggested.
Comment 8- Lines 167-168 and 172: UI 47 change to “UL 47 “
Response: We corrected them as you suggested.
Comment 9- The English language usage is poor and the whole text needs a major revision by a native English speaker. There are many typos including, but not limited to, the misspelled words in the text.
Response: We rechecked and corrected all grammatical errors (track changed word file).
Comment 10- Given that you are going to suggest an antiviral, it is very important to have the SI index, it is better to calculate the two factors EC50 and CC50 and enter them together with the SI index in the text of the manuscript.
Response: We added EC50, CC50 and SI to the method and result sections. Additionally, we added Table 2 containing EC50, CC50 and SI data to the manuscript.
Comment 11- There are missing references throughout the work, for example in line 98 (titration of HSV in Method section), p.16, lines 206 and 207, p.11.
Response: We added some references as you suggested.
Comment 12- Please cite 10.1002/iid3.667, 2022 for Antiviral activity.
Response: We cited article with doi: 10.1002/iid3.667 as you suggested.
Comment 13- In the discussion section, the reason for choosing UL47 in your study among other genes should be explained.
Response: We explained the reason for choosing UL47 in the discussion section.

2 Revision 1

0 comments

No public comments in this round.