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OPEN PEER REVIEW

Evaluation of (S)-10-Hydroxycamptothecin Inhibitor of Herpes Simplex Type 1 Identified from Screening of a Library of Natural Products

Nasrin Aliabadi, Mazyar Ziyaeyan, Marzieh Jamalidoust, Gholamreza Pouladfar

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About this report

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1 Original submission

1 comment · 6 Nov 2022

Referee 1 Reviewer

MAJOR REVISION 6 Nov 2022

Dear Editor
In the aforementioned manuscript, entitled "Anti-HSV activity of (S)-10-Hydroxycamptothecin in Vitro", the authors evaluate the effects of a natural product on HSV 1 infection in vitro for use as a new drug against the disease. The authors use different methods to verify their hypothesis, and the results can be useful for readers, but the manuscript still has some issues, which are mentioned as follows:
1- The title should be changed to a much more informative sentence.
2- The manuscript needs English language revision. Some sentences and paragraphs are confusing.
3- Some information about the compound should be added to the introduction.
4- Adsorption and penetration assays in the method section should be explained clearly and in detail.
5- Western blot was mentioned in the manuscript, but there is no description in the method or result section.
6- The subheadings in the result section are not the same as those in the method section.
7- Only table 1 is present in the manuscript; the others are missing.
8- The conclusion in the abstract section is not the same as the conclusion at the end of the manuscript. Some claims were mentioned in the second conclusion that are not supported by the results.
9- Recheck references based on the journal format.
Some other questions and corrections were mentioned in the revised Word file. Please find it attached.
Overall, the manuscript is valuable and can be accepted for publication in the Jundishapur Journal of Microbiology after major revision.

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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.

Manuscript. Number: 130237

Dear Sir / Madam

Thank you for giving us the opportunity to submit a revised draft of the manuscript “Anti-HSV activity of (S)-10-Hydroxycamptothecin in Vitro” for publication in the Jundishapur Journal of Microbiology. We appreciate the time and effort that you and the reviewers dedicated to providing feedback on our manuscript and are grateful for the insightful comments on our work. We have adequately addressed most of the suggestions made by the reviewers. Please see below, in blue, for a point-by-point response to the reviewers’ comments and concerns. All page numbers refer to the revised manuscript file with highlights.

Reviewer 1:

Dear Editor

In the aforementioned manuscript with the following "Anti-HSV activity of (S)-10-Hydroxycamptothecin in Vitro" title. the authors evaluate the effects of a natural product on HSV 1 infection in vitro for use as a new drug against the disease. the authors use different methods to certify their hypothesis and the results can be useful for readers but still, the manuscript has some issues which are mentioned as follow:

1- the title should be changed to a much more informative sentence

With thanks, we have changed title as “Evaluation of a large 133 Natural products library on Herpes Simplex Virus replication cycle and action mechanism evaluation of selected ones *in vitro*”

2-The manuscript needs revision for the English language. some sentences and paragraphs are confusing.

Thank you for the useful and appropriate comment. The manuscript was edited by a professional editor from Shiraz University of Medical Science.

3- some information about the compound should be added to the introduction

With thanks, we have added statement about our compound to introduction section as “A molecule called 10-HCPT, a Camptothecin (CPT), specifically blocks topoisomerase I that breaks and leaves the DNA strand during the replication stage. A few studies reported that CPT inhibited the replication and packaging of double-stranded and single-stranded DNA containing HSV-2, adenovirus viruses, papovaviruses, and autonomous parvovirus”, lines 59-62 on page 3.

4- adsorption and penetration assays in the method section should be explained clearly and in detail.

Thank you for your useful comments, we've revised the adsorption and penetration assays as suggested.

5- western blot was mentioned in the manuscript but there is not any description in the method or result section.

The correction has been made and added western blot to method (lines 210-225 on page 9) and Discussion (lines352-354 on pages 13 and 14) sections.

6-The subheadings in the result section are not the same as the method section

Thank you for your useful comments, we've revised the subheadings in the result section.

7- only table 1 is seen in the manuscript, others have been missed.

The correction has been made and added table 2 in the text lines 256-257 on pages 9.

8- conclusion in the abstract section is not the same as the conclusion at the end of the manuscript. some claims were mentioned in the second conclusion that is not supported by results.

Thank you for your useful comments, we've revised the statement as suggested:

"Overall,10-HCPT demonstrated anti-HSV activity on HSV-1. Their dose-dependent antiviral activity may show that specific cellular components mediate their function rather than cytotoxicity. Unfortunately, to date, literature on those aspects related to the antiviral effect of this compound is scarce. Further studies focusing on the activity of anti-HSV-1 mechanisms *in vivo* are necessary"

9- recheck references based on journal format.

Thank you for your useful comments, the references were corrected based on the Jundishapur Journal of Microbiology format.

some other questions and corrections were mentioned in the revised word file. please find in attachment.

overall, the manuscript is valuable and can be accepted for publication in the Jundishapur Journal of Microbiology after major revision.

Reviewer 2:

- Has one type of drug been used or different fractions of the same drug have been used?

With thanks, we used a library of different natural molecules, whose chemical structure is completely known.

- Is the drug used industrial or synthesized?

With thanks, these compounds are natural molecules separated and purified from natural materials including animal, bacteria, and marine sources.

- Is the selected virus checked for genome sequence after isolation and does it have an ATCC code or accession number?

With thanks, unfortunately, because Iran is one of the developing countries, we do not have access to standard virus strains from ATCC.

- It should be used in the study of a confirmed virus with an ATCC code.

2 Revision 1

0 comments

No public comments in this round.