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OPEN PEER REVIEW

# Cytotoxic Effects of *Rheum khorasanicum* Extract on MCF-7 Human Breast Cancer Cell Line and ODC1 Gene Expression

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**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 · 22 Jun 2022

**Fereshtesadat Fakhredini** Reviewer

MINOR REVISION 22 Jun 2022

1. Please remove “extract” from the keywords.
2. Why do you think Rheum khorasanicum can affect the expression of the ODC1 gene? Write a scientific reason.
3. Which statistical software and tests were used to analyze the experimental data? These are not mentioned in the article; please mention them.
4. Please carefully check the p-values in the text, figures, and legends. No p-values are shown in the text and images below.
5. Please explain the conditioned medium used in MCF-7 culture.
6. Also state the country of origin for chemicals and equipment wherever they are mentioned.

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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.

**Dear Editor,**

We have carefully reviewed the comments and have revised the manuscript accordingly. Our responses are given in a point-by-point manner below. Changes to the manuscript are shown in highlighted text.

We hope the revised version is now suitable for publication and look forward to hearing from you in due course.

Sincerely.
Again, we appreciate all your insightful comments. We worked hard to be responsive to them. Thank you for taking the time and energy to help us improve the paper.

Sincerely,

Corresponding Author

Reviewer #1

1. In the background of the article, add information about the studies done on Khorasanicum species.
   **Response**: Thank you very much for this comment. As mentioned in the background there is not any studies about biological activity of this species.

2. Explain about the identification and the person identifying the plant and the herbarium specimen number of the plant.
   **Response**: Many thanks for rising this important point. Requested information are added to methods.

3. Specify the kits used in the gene expression section.
   **Response**: Thank you very much for this comment. The kits specification is added to methods.
4. The charts appear to be drawn in prism rather than Excel.
   **Response**: Many thanks for rising this important point. Excel changed to Graghpad prism.
5. Describe the results of Table 2 in the text.
   **Response**: Thank you very much for this comment. The data in table 2 explained in the text.

6. In lines 136-137, the authors have written that “According to the results, R. khorasanicum could be considered a plant with antioxidant and anti-cancer compounds” but in this study, the antioxidant activities have not been studied.

**Response**: Many thanks for rising this important point. The above mentioned sentence is changed.

7. References should be adjusted according to the journal format.

**Response**: Thank you very much for this comment. All references adjusted to the journal format, accordingly.

8. There are no significant letters in Figure 3.

**Response**: Many thanks for rising this important point. The significance symbols are added to this chart.

Reviewer #2

1. Please remove “extract” from the keywords.
   **Response**: Many thanks for rising this important point. It is removed.
2. Why do you think Rheum khorasanicum can affect the expression of ODC1 gene? Write a scientific reason.
   **Response**: Thank you very much for this comment. As mentioned in conclusion, R. khorasanicum may be have phenolic compounds like those in R. ribes and based on literature, phenolics could affect ODC1 gene expression.

3. Experimental data by which statistical software tests? Not mentioned in the article, please mention.
   **Response**: Thank you very much for this comment. As mentioned, SAS 9.1 software is used.
4. Please, carefully checkup the p value in text, figures and legends. P value not seen in the text and images below.
   **Response**: Many thanks for rising this important point. p value is added in the text and image subtitles.
5. Please explain about conditioned medium used in MCF-7culture.
   **Response**: Thank you very much for this comment. As mentioned in methods: DMEM cell culture media, supplemented with 10% FBS (fetal bovine serum) was used to culture MCF-7 cells in a T25 tissue culture treated flask in 37° C with 5% CO2 and 95% humidity.
6. Write the country of origin also related to chemicals and equipment’s at all places.
   **Response**: Thank you very much for this comment. It is added.

Reviewer #3

1. In Page 3, line 39: change "he" to "the"

**Response**: Thank you very much for this comment. It is changed.

2. In Page 3, line 52: change "records" to "reports"
   **Response**: Thank you very much for this comment. It is changed.
3. In Page 3, line 54: " Esmaeilbeig et al. evaluated the apoptotic effects of R. ribes methanolic 55 extract along with 6 other plants on HeLa and K562 cell lines (18)." the authors have to explain the result of this study (reference 18) in the text.
   **Response**: Thank you very much for this comment. It is changed. the result of above mentioned study is explained.
4. Insert uncommon letters in the Figure 3.

**Response**: Thank you very much for this comment. Statistical symbols are added.

5. Insert uncommon letters and error bars in the Figure 1.
   **Response**: Thank you very much for this comment. Statistical symbols are added.
6. Please insert study design and explain the investigated groups in the materials and method section.
   **Response**: Thank you very much for this comment. Study design and the investigated groups inserted to methods
7. The authors have to explain the results of each extract and illustrate them. In figure 3 fold change of the 3 extracts have to illustrate.
   **Response**: Thank you very much for this comment. Requested explanations are added.
8. The language of the article should be improved.
   **Response**: Thank you very much for this comment. Grammatical improvement is done.

## 2 Revision 1

0 comments

*No public comments in this round.*