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OPEN PEER REVIEW

Synergistic Effect of Taxol and Vincristine Against MCF-7 Cell Line

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1 Original submission

1 comment · 21 Nov 2022

Referee 1 Reviewer

MAJOR REVISION 21 Nov 2022

In this work, the authors describe the synergistic effect of Taxol and Vincristine against the MCF7 cell line.

1. There is no novelty in this research. Another work has previously been published on the same subject, and only the tested cell line is different.
"Cytotoxicity of Taxol in Combination with Vincristine and Vinblastine Against A375 Cell Line"

2. The manuscript suffers from typographical errors and also needs English editing. Please go through the manuscript again and rectify the problems.

3. The experimental section is completely unclear, and the authors should rewrite this section in a more precise style. It should be expanded to include more detailed information.

4. The concentrations of different drugs have been stated in µg/ml, which does not allow their effects to be compared accurately. Please convert the unit of concentration to molarity and then compare the effects and rewrite the results.

5. The spelling of MCF-7 should be consistent in different parts of the text.

6. The concentration of MTT has been reported as 5 µg/ml. Please check it.

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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.

We would like to thank the reviewers for careful and thorough reading of this manuscript and for the thoughtful comments and constructive suggestions, which help to improve the quality of this manuscript. Correction has been made in the revised manuscript as follows.

Reviewer 1:
In this work the authors describe synergistic effect of Taxol and Vincristine against MCF7 cell line.

1. There is no novelty in this research. Another work has been previously published with the same subject and only the tested cell line is different.
"Cytotoxicity of Taxol in Combination with Vincristine and Vinblastine Against A375 Cell Line"

The *"Cytotoxicity of Taxol in Combination with Vincristine and Vinblastine Against A375 Cell Line"* work has investigated the in vitro cytotoxicity of Taxol, Carboplatin, Vinblastine and Vincristine alone and also in combination on the human malignant melanoma A375 cells as well as on the non-cancerous human fibroblast HU2 cells to examine the possible side effects of the drugs. According to the findings of in vitro toxicity, the evaluated complexes are not cytotoxic against human fibroblast HU2 cells. Also, the most significant effect on A375 cells was associated to Vincristine and Taxol + Vincristine treatments, respectively. However, the studied Carboplatin did not affect human malignant melanoma A375 cells when used alone.

However in current study synergistic effect of Taxol and Vincristine against MCF7 cell line was studied. From the results of the current study synergistic reaction was found between Taxol and Vincristine based on calculated CI values on MCF7 cell line

2. The manuscript suffers from typographical errors and also needs English editing. please go through the manuscript again and rectify the problems.
Correction has been made in the manuscript.

3. The experimental section is completely unclear and the authors should rewrite this section. in a more precise style. It should be expanded to include a more detailed information.
The *experimental section* was rewritten and changes were added to the manuscript.

4. The concentration of different drugs has been stated as µg/ml that cannot compare the effects truly. Please convert the unit of concentration to molarity and then compare the effects and rewrite the results.
Based on the suggestion of the respected referee, the concentrations were changed from *µg/ml* to µmol/ ml and the data were reanalyzed. However, due to the fact that the molecular mass of carboplatin was not within the range

of other treatments and after converting its unit it was out of the range of 10-320 µmol/ ml, this treatment was removed from the data analysis.

5. The spell of MCF-7 should be consistent in different parts of the text.
Correction has been made in the manuscript.

6. The concentration of MTT has been reported as 5 µg/ml. please check it.

Correction has been made in the manuscript.

Reviewer 2:
The authors in the manuscript in title " Synergistic Effect of Taxol and Vincristine Against MCF7 Cell Line" attempt to fund new approach combination therapy for breast cancer treatment. One of the most weaknesses of this study is they research on just one breast cell line"MCF7". This manuscript has some grammatical and spelling mistake also I list my concerns.

As you know, MCF-7 is one of the most widely used breast cancer cell line. But it is a good suggestion and in the next studies, different cell lines will be compared.

Abstract:
The Authors indicated " The examined compounds were applied to the cells for 48 h. The MTT test was employed for assessing the cytotoxicity, and nonlinear regression method was run to estimate the values of IC50 (half maximal inhibitory concentration) values." But in title they just mentioned about Taxol and Vincristine.

Because our Results showed that synergistic reaction was recorded only between Taxol and Vincristine combination of drugs (CI < 1). For this reason, we mentioned the synergistic effects of these two compounds in the title.

Also, in abstract they did not mention about statical results.
Main Text:

Correction has been made in the manuscript.

Material and methods:
In chemical section the authors started by " Inoclon (Iran)," I think some words omitted in this text.

Correction has been made in the manuscript.

Reviewer 3:

Dear editor I add some comments for authors to do.

Unfortunately, no file was attached.

2 Revision 1

1 comment · 5 Dec 2022

Referee 2 Reviewer

ACCEPT 5 Dec 2022

Dear Editors
The authors corrected all of my concerns.