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OPEN PEER REVIEW

Exploring the Influence of Sialic Acid on Drug Resistance in Glioma: A Focus on ABCB1 and ABCC1 Transporter Genes Expression

Farideh Rezaei, Mohammad Shafiei, Hamid Galehdari, Alireza Malayeri, Seyed Mehdi Kalantar

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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 · 5 Nov 2023

Referee 1 Reviewer

MAJOR REVISION 5 Nov 2023

Dear Authors
The manuscript needs major revision. Some hints are listed below:
- Please add the relevant references for the use of different concentrations of Temazolomide and Sialic acid in MTT.
- Please describe the morphometric and RNA extraction methods in different sections.
- Please calculate the combination index (CI) to evaluate the antagonistic effect of Sialic acid on Temozolomide (comparison of IC50 values is not acceptable).
- Please edit the English writing.
With best wishes

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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.

Reviewer 1:

Question:

Please add the related references for the application of different concentrations of Temazolomide and Sialic acid in MTT.
- Please describe the Morphometric and RNA extraction methods in different sections.
- Please calculate the combination index (CI) to evaluate the antagonism effect of Sialic acid on Temozolomide (Comparison of IC50 amounts is not acceptable).
- Please edit the English writing.

Reply:

1. The concentration of temozolomide and sialic acid were considered Based on the values that have been repeatedly tested in our laboratory and a review of articles such as; Temozolomide resistance in glioblastoma multiforme, Sang Y. Lee.2016.
2. A comprehensive explanation was provided for the RNA extraction section, accompanied by a modification in the paragraph's title. the study of cell morphology was briefly mentioned in the same text.
3. To prove that sialic acid increases the amount of IC50 of temozolomide, the concentration of sialic acid was kept constant and only the amount of temozolomide was increased. For this reason, our aim was not to measure the combination index (CI).
4. The examination of cell morphology under the influence of temozolomide and sialic acid, as well as temozolomide + sialic acid, was conducted using an inverted microscope at 48 and 72 hours. It was shown that the presence of sialic acid in the cell environment is related to increased cell growth and increased drug resistance. Cell dimensions were not measured. Instead, the focus was on comparing the visual properties of the cells.
5. The English text was edited
6. Table added for Primer Sequences used for Real-Time PCR

Reviewer 2:

Question:

Reply:

Reviewer 3:

Question:

Reply:

…

2 Revision 1

0 comments

No public comments in this round.

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Revision 2

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.

Reviewer 1:

Question:

> Reviewer 1:
>
> This article is acceptable.
>
> 1-fig.1: in the figure legend, change "321N1 cell line" to " 321N1 cells".
>
> 2-fig.2: in the figure legend, change "4x resolution" to "x4 magnification".
>
> Associate Editor's Comments:
>
> Associate Editor 1:
>
> This article is acceptable.
>
> 1-fig.1: in the figure legend, change "321N1 cell line" to " 321N1 cells".
>
> 2-fig.2: in the figure legend, change "4x resolution" to "x4 magnification".
>
> EIC Decision:
>
> This article is acceptable.
>
> 1-fig.1: in the figure legend, change "321N1 cell line" to " 321N1 cells".
>
> 2-fig.2: in the figure legend, change "4x resolution" to "x4 magnification".

Reply:

1- fig.1: in the figure legend, "1321N1 cell line" changed to " 1321N1 cells".
2- fig.2: in the figure legend, "4x resolution" changed to "x4 magnification".

Reviewer 2:

Question:

Reply:

Reviewer 3:

Question:

Reply:

…

3 Revision 2

0 comments

No public comments in this round.