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OPEN PEER REVIEW

Oxidative Stress Induction by Gold Nanoparticles in HCT-116 Colon Cancer Cells

Atefeh Maddah, Hiva Danesh, Nasrin Ziamajidi, Hossein Khosravi, Roghayeh Abbasalipourkabir

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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

3 comments · 13 Feb 2024 – 15 Mar 2024

Reihaneh Seyedebrahimi Reviewer — MINOR REVISION — 13 Feb 2024

Hi,
Thanks for writing a good manuscript; however, this manuscript needs minor revisions.
The comments were attached.

Associate Editor — MINOR REVISION — 10 Mar 2024

Making corrections in accordance with the respected reviewers' opinions

Editor-in-Chief — MINOR REVISION — 15 Mar 2024

Review comments were sent in a Word file.

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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.

Reviewers' Comments:

Reviewer 1:

Hi,

Thanks for writing of good manuscript, however, this manuscript needs minor revisions. The comments was attached.

1. Line 30: (Familial) changed to (familial)

Reply: Thank you. It was corrected

2. Line 34: reference (6) needs the space.

Reply: Thank you. It was corrected

3. In the abstract and method, 24 and 48 hours are used to evaluate MTT, while three times (24, 48 and 72 h) are mentioned in the method, please correct it.

Reply: Thank you. It was corrected (72h was deleted).

4. Why was purchased AuNPs with a diameter of 20 nm? Can the diameter and shape affect on the anticancer properties of these particles?
Reply: Thank you. The size of nanoparticles should be under 100nm. The smaller the size, the greater the possibility of particle penetration through the cell membrane. Of course, we purchased these nanoparticles from Nanosany Company and did not synthesize them.

5. There was no Figure 1 in the text. Please figure 1 was referred in the text.
Reply: Thank you. Figure 1 is mentioned in the “Method” section (Line 100)

6. In method and result was not referred to 1.55 µg/ml AuNPs concentration while there was this concentration in figure 2.
Reply: Thank you. It was corrected.

7. Figures 2 and 3 both have the same data and are only drawn in two ways. One of them should be deleted.
Reply: Thank you. Actually, Figure 3 shows the comparison of two times and their difference in the one graph. Also, the determination of optimum concentration (IC50) is shown in the Figure 3. However, if it should be removed, please let us know.

8. The image resolution should be 300 dpi.
Reply: Thank you. They are prepared as 300dpi

9. It is better to mention the optimal AuNPs concentration in the conclusion.
Reply: Thank you. this statement was added to the “Conclusion” section.

Reviewer 2:

The manuscript entitled; Oxidative Stress Induction by Gold Nanoparticles in HCT-116 Colon

Cancer Cells, discuss about oxidative stress parameters that may be induce by gold nanoparticle in cell culture medium. The paper should be revised as below before acceptance or possible publication;

1- The text of the manuscript should be checked literately and grammatically and be revised.

Reply: Thank you. The manuscript was checked literately and grammatically and revised by native English language. Also the certificate of edit is attached.

2- The method that was used for synthesis of GNPs must be mentioned in the paper and other possible contaminant and impurities should be reported.

Reply: Thank you. We did not synthesis the nanoparticles, but it was purchased from the Iranian Nanomaterials Company, (NANOSANY, Mashhad, Iran).

3- Figure 1 is not a fair and suitable image. It seems, it only shows an aggregate of GNPs. If it’s possible, replace it with a suitable one.

Reply: The better image was replaced.

4- In figure 2, indication of “ns” in the graph is not seems necessary.

Reply: “ns” was removed from Figure 2.

5- Figure 3 could be removed from the manuscript.

Reply: Thank you. Actually, Figure 3 shows the comparison of two times and their difference in the one graph. Also, the determination of optimum concentration (IC50) is shown in the Figure 3. However, if it should be removed, please let us know.

2 Revision 1

3 comments · 9 May 2024 – 11 May 2024

Referee 1 Reviewer

MINOR REVISION 9 May 2024

The manuscript entitled “Oxidative Stress Induction by Gold Nanoparticles in HCT-116 Colon Cancer Cells” discusses oxidative stress parameters that may be induced by gold nanoparticles in cell culture medium. The paper should be revised as follows before acceptance or possible publication:
- Previously, I recommended: “The text of the manuscript should be checked literately and grammatically and be revised” but there is no sign of any revision or highlighting. Please revise it and also highlight the revised part.
- As I indicated before: “Figure 1 is not a fair and suitable image. It seems, it only shows an aggregate of GNPs.” So, if possible, replace it with a suitable one or remove it. You could also use other approaches like DLS to determine the exact size of the particle. It seems you have just uploaded another aggregate image!
- The sequence of the uploaded images is incorrect. Please upload the images in the correct order.
- In figure 2, the indication of “ns” in the graph does not seem necessary.

Associate Editor

MINOR REVISION 11 May 2024

This article needs minor revision.

Editor-in-Chief

MINOR REVISION 11 May 2024

This article needs minor revision.

3

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.

Reviewers' Comments:

Reviewer 1:

Dear author;

The manuscript was accepted.

Reply: Thank you so much

Reviewer 2:

The manuscript entitled; Oxidative Stress Induction by Gold Nanoparticles in HCT-116 Colon Cancer Cells, discuss about oxidative stress parameters that may be induce by gold nanoparticle in cell culture medium. the paper should be revised as below before acceptance or possible publication;

- Previously I recommended; “The text of the manuscript should be checked literately and grammatically and be revised” but there is no sign of any revision and any highlight. Please revised it and also highlight the revised part.

Reply: Thank you. The text of the manuscript was checked literately and grammatically, revised, and highlighted.

- As I indicated before; “Figure 1 is not a fair and suitable image. It seems, it only shows an aggregate of GNPs.”. So, If it’s possible, replace it with a suitable one or remove it. You also could use other approaches like DLS to determine exact size of the particle. It seems you just upload another aggregate pic!!- The consequence of uploaded pics is not correct. Please upload imaged in a correct way.

Reply: Thank you. We obtained the information of the nanoparticles, including the TEM image, from Iran Nanomaterials Company (NANOSANY, Mashhad, Iran), where we purchased the gold nanoparticles. Unfortunately, we don't have any more of these nanoparticles to do DLS at the moment. In these cases, we would prefer to delete the Figure 1.

- In figure 2, indication of “ns” in the graph is not seems necessary.

Reply: Thank you. “ns” was removed from Figure 2.

3 Revision 2

1 comment · 8 Jun 2024

Editor-in-Chief

ACCEPT 8 Jun 2024

This article is accepted.