Reviewer's report

Title: Effect of Gallic acid and Myricetin on ovarian cancer models: a possible alternative antitumoral treatment

Version: 1 Date: 10 Oct 2019

Reviewer: Fedora Grande

Reviewer's report:

The paper is a study focusing on the evaluation of the anticancer properties of gallic acid (GA) and myricetin (MYR) in in vitro and in vivo ovarian cancer models. Since this type of cancer is still a leading cause of death among hormone-sensitive cancers, and the clinically available drugs are endowed with severe toxicological effects, the identification of alternative, efficient and low toxic agents, is still demanding. The promising achieved results (even if the compounds are not extremely active) as well as the low toxicity of both GA and MYR suggest their potential use as starting point for the development of novel anticancer agents.

The paper falls within the scope of the journal and the work contains enough data anyway, the manuscript requires some changes before it can be accepted:

* Keywords should not contain the same words present in the title (i.e Gallic acid, Myricetin and ovarian cancer).

* Where in the "methods" section well known procedures are described, authors should reference the original papers that the information have come from and then provide a summary of the methods rather than the whole text.

* In the results section:

For the Biological activity of GA and MYR in cell lines, authors should also use a known drug (i.e. paclitaxel) as positive control.

* For the in silico studies, authors declare that "evaluation in silico studies demonstrated that GA and MYR interact with carbonic anhydrase and PIK3CG, respectively". It would be appropriate to carry out some molecular docking studies on the PDB structure of both proteins to obtain more detailed information regarding this point.
The conclusions should be improved to provide a more comprehensive summary of the entire work and, above all, avoiding to repeat the same sentences used in the "conclusion" of the abstract. Furthermore, the authors say that "these compounds could be used in the chemotherapy of this pathology" I suggest to rewrite this sentence indicating that "GA and MYR could be considered as starting point for the development of novel anticancer agents".

In table 4, please replace the stick and ball structure of the molecules with the linear ordinary chemical structure directly drawn by using ChemDraw or other similar software.

Bibliographic references should be formatted and made uniform according the journal rules.


After these modifications the paper could be accepted for publication.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No
Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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