Reviewer's report

Title: A cyclopalladated complex interacts with mitochondrial membrane thiol-groups and induces the apoptotic intrinsic pathway in murine and cisplatin-resistant human tumor cells

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Reviewer: Adeleh Divsalar

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BMC-Cancer reviewing

In this manuscript, the melanoma cell killing (inducing of apoptosis) mechanism by compound of C7a was investigated. While the idea behind the work is good and the data generated are useful in understanding the mechanism of death in melanoma cell line. But, I think this manuscript needs major revision before publishing in the Journal of BMC-Cancer. The points are as follow:

1) The compound C7a is a synthesized anticancer compound not drug! Why do you use the word of drug for this compound? It needs to edit.

2) Since cell cycling time for almost of cells is 24 h or more. Why do you calculate IC50 Values at 24h? You have to calculate these values at 48h.

3) What's your solvent for Compound of C7a? It must mention in Materials and Methods section.

4) In background section, the literature review is very weak. Also, you used old references in this section. You must use newer references.

5) As we know the reasons of high rate resistance of Cis Pt is the ability of it for interacting with methionine, metallothioneines and GSH. Also, in page of 24, you said that C7a interact with thiol groups of protein, then it can able to interact with methionine, metallothioneines and GSH and will show resistance. How can explain it? Clarify in text.

6) In Figure 4, the name of Y-axis is missing. Correct it.

7) What are the uncertainties in the measurements of IC50 at Tables 1-3?

8) The references were not arranged correctly for example, in Page 19, we can see ref 21 and in page 20, you mentioned to ref 28-30. The references of 21-28 are missing. It must arrange correctly.

Level of interest: An article of importance in its field

Quality of written English: Acceptable
Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests