Reviewer’s report

Title: Jingfukang induces anti-cancer activity through oxidative stress-mediated DNA damage in circulating human lung cancer cells

Version: 3 Date: 21 Feb 2019

Reviewer: Sahabjada Siddiqui

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Manuscript - BCAM-D-18-01101R2

Title "Jingfukang induces anti-cancer activity through oxidative stress-mediated DNA damage in circulating human lung cancer cells"

To test their hypothesis, authors have performed various functional assays. Data generated in this study are interesting and convincing, however, there are some grammatically errors; at some points, explanation is not clear and the presentation of some figures is haziness, which is not suitable to publish in this current form.

Authors need to address following issues in this manuscript:

Major comments:

-What are the correlation between Cyclin A, B, D1, E1 and CDK1, 2, 4, 6 at G1 phase. Describe it details regarding check points in discussion part.

-The cell cycle diagram of Figure 1C, it is not clear whether Jingfukang arrest the cell at G1 phase. Replace these figures with new one.
Abstract-

Methods: In this study, we investigated the action and underlying mechanisms of Jinfukang against circulating lung tumor cells.

- Place this sentence in background section.

- Cell viability assay

- What is the process of dose preparation?

- What is the percentage of DMSO for stock preparation?

- DMSO itself can cause cell death at more than 0.1%. Have you made -ve control?

- At which wavelength, have you read the absorbance? Mention it.

- Colony forming assay

- What is the criteria of doses selection (350 and 700ug/mL) for the rest of the experiments, although the IC50 of Jingfukang at 728.8ug/mL.

- Comet Assay

- Describe the methods in brief.

Results

Jinfukang inhibits proliferation of CTC-TJH-01 cells

- The cell cycle diagram of Figure 1C, it is not clear whether Jingfukang arrest the cell at G1 phase. Replace these figures with new one. Bold the axis title and show the legend on cell cycle diagram.
Jinfukang induces apoptosis in CTC-TJH-01 cells

- Figure 2C, 2E are blurred, make it clear and bold.

- Also insert the page no. in the manuscript file.
- Our found that the CTC-TJH-01 cells showed, what is meaning of this sentence?

Jinfukang induces apoptosis of CTC-TJH-01 cells by promote ROS generation

- Revise this heading.

Jinfukang induces the apoptosis of CTC-TJH-01 cells through DNA damage

Previous studies have confirmed that increased ROS levels can cause DNA damage and induce cell apoptosis [18];

- Describe only the results here, discussion and citation should be in Discussion part.

Similarly;

Jinfukang induces the apoptosis of CTC-TJH-01 cells through the ROS-mediated ATM/ATR-p53 pathway

It is well known that ROS-mediated oxidative damage can induce tumor cell apoptosis through signaling pathways such as the caspase, MAPK, and PI3K/AKT pathways [19, 20].

- Describe only the results here, discussion and citation should be in Discussion part.

Discussion

The present study demonstrates that Jinfukang can induce the apoptosis of lung cancer cells by activating the expression of AIFM2.

- Which study has demonstrated that? It seems that you have reported the previous study, so give the citation just after this sentence and also revise the language.
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.

Unable to assess

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

Yes

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.

Not relevant to this manuscript

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

Needs some language corrections before being published

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