Reviewer's report

Title: Frankincense essential oil prepared from hydrodistillation of Boswellia sacra gum resins induces human pancreatic cancer cell death in cultures and in a xenograft murine model

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Reviewer: Jagan Mohan Patlolla

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In the manuscript entitled

“Frankincense essential oil prepared from hydrodistillation of Boswellia sacra gum resins induces human pancreatic cancer cell death in cultures and in a xenograft murine model”

Xiao Ni, Mahmoud M Suhail, Qing Yang, Amy Cao, Kar-Ming Fung, Russell G Postier, Cole Woolley, Gary Young, Jingzhe Zhang and Hsueh-Kung Lin

1) Authors Ni et al tested the effect of Frankincense essential oil prepared from hydrodistillation from Boswellia sacra gum resins on human pancreatic cancer cell lines cell death, apoptosis and therapeutic effect by conducting xenograft experiments. The authors attempted on important pancreatic cancer disease whose survival rate is very low and it is difficult to diagnose in the early stage. The authors have focused on a naturally occurring phytochemical oil extracted from the gum resin and attempted the effect of drug on 4 cell lines which are resistant to drugs.

2) Ni et al, should have followed consistency in naming the cell line. In some places it is Mia CaPA, MIA PcCA( page 16, page 17) and in some other places it is Mia Paca. To my understanding it is Mia PACA-2. In the same way for Pan28 (page 17).

3) There are typo mistakes here and there like on page 12 instead of “cases” it should be “cages”. They should check for the typo errors here and there in the manuscript.

4) Authors should have expanded the word PHH3 when they used for first time.

5) In pancreatic cancer phosphorylation of AKT leads to cancer cell survival and proliferation. But Ni et al experiments are showing the fraction III frankincense oil is inhibiting p-AKT in cell lines like BxPC-3 and DANG where as fraction IV it is inducing and activating p-AKT in Mia Paca-2 cell line and inducing at lower concentration. Authors are failed to discuss or address what may be the reason is it the different cell lines or the morphology of the cell lines or each cell line belong to different cancer stage which they are making them resistant to the drug.
6) Ni et al have taken total protein lysates and measured the different molecular markers modulation under different time intervals. What is the rationale behind in taking time intervals instead of trying at least two doses of each fraction in different cell lines.

7) I don't think it is necessary to keep figure 3A, as there is no clear DNA fragmentation.

Lastly if the above minor issues are addressed and revised it can be acceptable for publication

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.