Reviewer’s report
Title: Bufalin, an effective anti-proliferation and anti-invasion component in Chansu for hepatocellular carcinoma
Version: 1 Date: 1 March 2013
Reviewer: suresh kumar

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Minor essential Revisions

Comments
Bufalin, an effective anti-proliferation and anti-invasion component in Chansu for hepatocellular carcinoma
Dong –Ze Qiu et al
The paper has shown interesting observation and have demonstrated the utility of bufalin in hepatocellular carcinoma. This work is good and it may have potential to acceptance contingent upon few suggested modifications.

Comments:
Author should mention about the available treatment and other phytochemicals, chemopreventive agents worked out invitro and invivo.

It looks from the statement from introduction that “patients with advanced HCC have median survival… no effective treatment for these patients “ the present study doesn’t ensure any effective treatment? Authors are advise to modify the sentence/ restrict with certain statement i.e to identify any bioactive components that can be effectively suppress HCC cell growth invitro.

Our results revealed that bufalin significantly decreased the “invasion” potentials of HCCLM3-write “Invasive” potential.
This study was conducted in two different phases;
1) Effect of buffaalin- decrease cell proliferation, cell invasiveness, cell adhesion

The phenotypic observation ie cell proliferation, cell invasiveness, cell adhesion with respect to bufalin treatment was not corroborated with expression of certain mentioned molecules which were expected to play role. The cells in which the bufalin was treated, the reduction of proliferation and invasiveness was observed, in the same treated cells they have to conduct the molecular players such as AKT’s role. Rather author have represented separately. Author has to clearly state akt inhibition by bufalin actually decrease proliferation, invasiveness through E cadherin over expression etc. This needs a simple reformatting the paper with observed phenotype and representing the molecular reasoning.

Under the head –Effect of Buffalin in GS3Kb
There is no enough assay to say this statement “These results confirm that bufalin inhibited the nuclear translocation of #-catenin via the PI3K/Akt/GSK3# signaling pathway”

Fig 15/slide 15
GSK3b expression blots are not convincing, please redo it and send a convincing results. In case of pGDK3b the blots are not having any changes at different time points, at 12 hours (HCCLM3) it has shown reduction and at 24 hours it looks normal. This particular slide, whole experiments may be advised to redo and send convincing results.

Fig 21 slide MMP expressions may be repeated

Fig 22 slide E-
The MMP2, MMP9 expressions were analysed upon treatment with Bufalin and LY, The expression pattern or blotting of MMPs are not convincing, it is suggested to re-do it and send a convincing results of the same.

Author may say few evidential supports of differences in treatment response between the two cell lines and in discussion more emphasis may be given to argue their own results.

With the said Minor/Discremodification author may be asked for resubmission.

**Level of interest:** An article whose findings are important to those with closely related research interests

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

**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