Reviewer's report

Title: Targeting beta-Catenin signaling to induce apoptosis in human breast cancer cells by z-Guggulsterone and Gugulipid extract of Ayurvedic medicine plant Commiphora mukul

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Reviewer: Ke Xu

Reviewer’s report:

In the present study entitled ‘Targeting beta-Catenin signaling to induce apoptosis in human breast cancer cells by z-Guggulsterone and Gugulipid extract of Ayurvedic medicine plant Commiphora mukul’, Jiang et al demonstrated that Gugulipid (GL) inhibited breast cancer cell MCF-7 and MDA-MB-231 growth, induced apoptosis, but had limited effect on the normal human mammary epithelial cell line (HMEC). They further showed that GL inhibited breast cancer cell growth via #-catenin pathway. The experiments are nicely controlled and analyzed. These findings may provide a novel therapeutic strategy for breast cancer.

Major Compulsory Revisions:
1. for apoptosis analysis, flow cytometry using Annexin V is classic method, why don’t use that method?
2. more information for the siRNA duplex is needed, for example, the sequences of the siRNA duplex
3. in the Discussion section, there were a few place that just repeated the result, they should be amended.
4. in Fig 4A,B, there were more than one band of #-catenin, it is unusual

Minor Essential Revisions:
1. there are a few place that ‘survival’ should be ‘survivin’
2. in the Abstract, ln 7, viability – growth; ln12, decrease – decreased expression; ln17, inducing – induced; Ln 13, transcription activity of transcription factor. And there are too many ‘significantly’
3. in the Reagents section, need more detail of the company, for example, Cell Signaling, Invitrogen (country?)
4. pg7, ln 16, ‘independently prepared’ seems not finished
5. pg10, ln8, bu—but
6. pg10, ln17, can be seen---shown, also in pg13,14
7. pg11, ln18, gen---gene
8. Fig 4, survival—survivin
9. pg12, ln1, nuclear—nuclei, cytoplasmic—cytoplasm; ln4, results ‘were’ shown
10. pg16, 1st paragraph, a)—(a), b)—(b), c)—(c)
11. Fig legends, Fig3, GL inhibited—reduced; Fig4, survival—survivin

The grammar need to be improved.

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

**Declaration of competing interests:**

I declare that I have no competing interests