Reviewer's report

Title: A hepatoprotective Lindera obtusiloba extract suppresses growth and attenuates insulin like growth factor-1 receptor signaling and NF-kappaB activity in human liver cancer cell lines

Version: 1 Date: 17 March 2011

Reviewer: AR Khuda-Bukhsh

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A hepatoprotective Lindera obtusiloba extract suppresses growth and attenuates insulin like growth factor-1 receptor signaling and NF-kappaB activity in human liver cancer cell lines (review)

Authors: Christian Freise et al.

Comments:
This paper is interesting, but has several concerns, which the authors should take care and revise accordingly:

1. The figures of the Western Blot are unclear, and based on these figures, it is difficult to interpret results. Better representation with good figures is needed. Further, no quantitative estimation of band expression has either been provided.

2. Why didn’t the authors provide any data of another arm of control preferably taken from the culture of normal liver cells? A comparison with say, PBMC, could have enriched the findings and thus provide more convincing data. The data on normal basal level of activity of enzymes is important to know to ascertain if it is actually increased or decreased than the basal level.

3. For the transfection experiment of HCC, it was stated that a plasmid was used, but description of the type/orientation of the plasmid was not provided. There was no mention of the transfection efficiency of the plasmid either.

4. Several cell lines were mentioned, like HepG2 (ATCC HV-8062), Hep3B (ATCC HV-8064), Huh-7 (JCRB 0403; Tokyo, Japan) and SK-Hep1 (ATCC HTB-52), but the data provided appeared to deal mainly with Hep3B and SK-Hep1 for Western Blot analysis. What’s about the other cell lines? What was the rationale behind studying different aspects using different cell lines? Why the authors preferred to study one parameter in one cell line and another in another cell line?

5. Providing supportive evidence of microscopic study indicating profibrotic activity or conformational change of cells should be more convincing.

6. There has been no or very little mention of the ingredients or main bioactive components present in the aquatic extract of L. obtusiloba, and their possible action. Suitable references of this aspect should be added.
Minor points:
1. IC 50 values not mentioned, and how the exact dose and time period was selected should be stated briefly but more clearly.
2. There are a few typos: P.3, TGF #, Page 4, …7,9 and 10,4 ..? P6, ..ovar…
3. Conventionally, cell nos. in Y axis are represented as 1x103, 2x103 etc.

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

Quality of written English: Acceptable

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

Declaration of competing interests:
I have no competing interest.