Reviewer's report

**Title:** Modulation of apoptosis in human hepatocellular carcinoma (HepG2 cells) by a standardized herbal decoction with anti-hepatocarcinogenic effects.

**Version:** 2  **Date:** 21 December 2011

**Reviewer:** Rajan Somasundaram

**Reviewer's report:**

Samarakoon et al. submitted a manuscript which aimed to describe the modulation of apoptosis in the human HCC cell line HepG2 by a herbal decoction.

The decoction is already used for several years in basic research experiments using HepG2 cells as a model cell line. Many potential anticarcinogenic effects such as cytotoxicity, anti-inflammatory effects and even apoptosis – which is the major subject of this manuscript - has been investigated in previous studies.

Provided that certain changes and accompanying experiments are added to the manuscript, this work will fit into the aims & scopes of the Journal (see below).

**Major Compulsory Revisions:**

1. Most important it is of interest if the decoction also affects apoptosis in "normal" liver cell lines. Please perform some additional experiments using e.g. hepatic stellate cells or other cell types.
2. The apoptosis inducing effects of the decoction should be tested in at least one other HCC cell line.
3. In the whole manuscript it is not stated how the decoction was standardized. A section where the standardization is described (which internal standards, which concentrations, which methods) should be added to the manuscript.
4. Derived from the new standardized-section, some information or discussion about the active ingredients of the decoction should be added.

**Minor essential revisions:**

1. The discussion would be easier to follow if own results in the text are recommitted to the respective figures.
2. Please discuss the differences in the concentrations of the decoction between earlier studies and the present study (0-50 mg/ml vs. 0-1200 µg/ml).
3. Please add the gel pics of the PCR in the supplemental data.
4. Maybe a table or a bar chart instead of the present Fig. 1 would be better?
5. In the title, the three components of the decoction should be named.
6. Please support higher resolution images of the figures.
Level of interest: An article of limited interest

Quality of written English: Acceptable

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.