**Author's response to reviews**

**Title:** Molecular insights into the anti-cancer properties of Traditional Tibetan medicine Yukyung Karne

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**Response to Reviewer’s reports**

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**Title:** Molecular insights into the anti-cancer properties of Traditional Tibetan medicine *Yukyung Karne*

**Reviewer 1: S. Sivaramakrishnan**

**Reviewer's report:** This study was very interesting and appreciable, the authors have shown excellent data. It is appropriate article for publication in BMC Complementary and Alternative Medicine. Authors have screened the anticancer potential of Yukyung karne (YK) Tibetan formulation in view to develop alternative anticancer regime, it should be appreciable and more relevant to this journal. With careful proofreading I *recommend publication* of this article.

**Level of interest:** An article of outstanding merit and interest in its field

**Quality of written English:** Acceptable

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

**Reviewer 2: Ali Ghasemzadeh**

**Reviewer's report:** The author *must respond* to these before a decision on publication can be reached.

**Q1-In material and method section the extraction methods and preparation of different concentration must be explained. Extraction was done with which method, solvent etc?**

**Ans:** As described on page 4 under the plant material section, *Yukyung karne* (YK) is a standard polyherbal formulation prepared according to Tibetan Pharmacopeia [References 14]. We purchased the samples of YK from the Tibetan Medical and Astrological Institute (TMAI), Dharamshala, India and dissolved in glass distilled water. The YK samples were diluted in water to get desired concentrations for present experiments. No extraction step was involved.

**Q2-How the authors choose these concentrations: 1, 10, 100 mg/ml?**

**Ans:** To find the optimal working concentration of YK, in the beginning we tested a wide range of its dilutions (1 µg to 200 µg/ml) in our experiments. As the optimal effect of YK was observed at 100 µg/ml, all our experiments were performed at this concentration.

**Q3-Author explained: YK comprises of a mixture of root of.... The ratio of these materials should be given.**
Ans: As stated above, YK is an ancient traditional Tibetan medicine. Its composition is described in Tibetan pharmacopeia. The details of YK’s composition and their ratio can be found in reference 14. (Dawa: 2003. Bod kyi Gso Ba Rigpa Las Sman Rdzas Shyor lag len Gsan Sgo byed Pai Lde Mig. RigDrag publication Dharamsala, India; 2003). Thus YK was procured from TMAI and not formulated in our laboratory.

Q4-MTT assay process should be explained completely. For all tables, Duncan analysis should be done in order to see differences between samples. Down Legend of Table 1 is wrong.

A: MTT assay was performed according to van de Loosdrecht et al. [new Ref. 15 inserted]. Further, as suggested by the reviewer, MTT assay has been explained on page 6.

As suggested by the reviewer, Duncan analysis was applied to data of both Table 1 and 2. The relationship between different groups and the level of significance are described in the text on page 11.

Further, the legends of both tables have been removed.

Q5-In figure 1, can not use SD, re install the bars based on standard error of means. In figure 1B the bars do not show significant differences but the author’s putted star on the columns.

Ans: As suggested by the reviewer, the SD values in Fig. 1B was converted to SEM as shown below and a fresh figure panel with Y bar was redrawn and inserted in Figure 1. The level of significance for Paclitaxel (p < 0.003) and Pac+YK (p < 0.005) was derived as compared to control.

Q6-In the supplementary file 1, the author reported HPLC analysis, but the method was not described. What was the gradient elution? What were the compounds? Which standards were used? What were the concentrations of identified compounds? How the concentrations calculated? How the compounds were identified?

Ans: As suggested by the reviewer, the method of HPLC has been described under the materials and methods on page 8. The reviewer may note that the aim of our experiments was not to identify pure compounds from YK using HPLC. Rather, it was used to identify characteristic peaks (fingerprints) of YK samples. Thus, HPLC helped us in keeping a record of batch variations among samples and use only those samples that had similar fingerprints.

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

Level of interest: An article of limited interest

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