Reviewer's report

Title: The immunomodulator PSK induces in vitro cytotoxic activity in tumour cell lines

Version: 1 Date: 30 November 2007

Reviewer: Rathin K Bhattacharya

Reviewer's report:

The paper describes the cytotoxic effects of immunomodulator PSK. The findings are very preliminary. There is no originality in designing the research plan. PSK was shown to have cytotoxicity in all tumor cell lines tested. What is new? The compound is active against many tumors. Besides, all cell lines were not subjected to all experiments, such as neuraminidase treatment, cell cycle analysis, and particularly annexin V experiment and caspase 3 activation. Moreover, it was not clear why neuraminidase treatment did not alter PSK cytotoxicity. Apoptosis was measured in only two cell lines, that too using limited apoptotic parameters (expression of caspase 8, bax/bcl, cytochrome c and DNA fragmentation, morphological characteristics have been ignored). It is stated that PSK induced apoptosis in certain cell lines (only two used) indicating cytotoxic effect by different molecular mechanism depending on histology of tumor. This conclusion is not validated by experimental results. It was also not clear if PSK activity is tumor specific as no conclusion could be drawn from PBL experiment. Figure numbers are absent under the figures, and it is difficult to comprehend from the legends as these do not describe what are being measured and how these are measured.

What next?: Reject because too small an advance to publish

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 interest.