Reviewer's report

Title: A new extract of the plant calendula officinalis produces a dual in vitro effect: cytotoxic anti-tumor activity and lymphocyte activation

Version: 1 Date: 27 March 2006

Reviewer: KYUNG-SUN Kang

Reviewer's report:

General

This studies were performed to know whether plant extract from calendula officinalis has an anti-tumor activities in various cell lines. The authors found that exposure of cancer cells to CE extract, results in a cell death as indicated by apoptosis and that such a apoptotic phenomenon caused by CO extract is attributable to activate caspase 3 and arrested G2M cell cycle phase. The findings are some interesting but this manuscript should be required Major Compulsory revisions.

Major Criticisms:
1. Please rationalize the dose selection of CE for in vitro experiment.
2. The analytic major constituents of the water extract should be provided in the results part.
3. There are cytotoxic effects on the cancer cell lines in this study. If so, What about normal cell or cell line?
4. In this study, in vivo toxicity assays, more detailed toxicity tests should be done under the tight regulation. Therefore, in the present study, the author had better show in vivo tumor regression assay using nude mice than incompleted in vivo toxicity test.
5. This study should include more molecule mechanistic studies.

minor.
1. Page 4. material and methods
; MDA231 cell line is MDA MB 231 cell. And MDA MB cell lines were series cell lines. Therefore, specify MDA MB cell?.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:
'I declare that I have no competing interests.