Reviewer's report

Title: Topically Applied Tea Extracts to Treat Radiation-induced Skin Toxicity - Involvement of a Caspase-dependent Mechanism

Version: 1 Date: 16 August 2006

Reviewer: Q Dou

Reviewer's report:

General

Although the title of this manuscript is "Topically applied tea extracts to treat radiation-induced skin toxicity", most of the data are from in vitro studies. Therefore, the title should be revised accordingly.

The clinical data presented are interesting, however, there are some questions and concerns about other data as below.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

In figure 3, the authors need to show the results from the supershift assays using an anti-p65 antibody to confirm the specificity of the bands. Indeed, mixing the anti-p65 antibody with the nuclear preparations of both control and 4% green/black tea-treated cells is essential to clarify whether some of these bands contain p65/NFkB.

The most interesting result was figure 3C in which z-VAD-fmc reverses the effect of tea. The authors indicated the possibility of caspase-dependent cleavage of NFkB (also mentioned in the title). If so, Western blotting using these preparations could show the cleavage of p65 and/or p50. The authors should perform this experiment to investigate this possibility.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

In Table 2, inhibition of the Tryptic activity by black tea is not dose-dependent. The authors should offer an explanation.

EGCG was used at 400 uM, which is too high and far beyond the physiological concentration.

In Fig. 3E, lanes from treatment of 4% green tea and 4% black tea are different from those in Fig. 3A and B and those from co-treatment of tea and z-VAD-fmc are different from those in Fig. 3C. The authors should offer an explanation.

Fig. 3F, the specific 19 kDa cleavage product of Caspase-3 should be shown.

Discretionary Revisions (which the author can choose to ignore)

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 outstanding merit and interest in its field
Quality of written English: Acceptable

Statistical review: No

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