

## Hexane Fraction of American Ginseng Suppresses Colitis and Colon Cancer—Response

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We wish to thank Drs. Chan and Huff for pointing out their elegant toxicology and carcinogenicity studies on *Panax ginseng* (1, 2). We are happy to see that such a high dose of *P. ginseng* (1, 2) is nontoxic and noncarcinogenic in both short- and long-term studies. Doses used in the studies of Chan and colleagues (1, 2) were 0; 1,250; 2,500; or 5,000 mg/kg body weight of ginseng in sterile water administered 5 d/wk by oral gavage. Comparatively, we used 11.93 mg/kg body weight of American ginseng (AG) or hexane fraction of AG (HAG; refs. 3–5), which is 100 to 400 times less than what was used by Chan and colleagues (1, 2). From the study conducted by Dr. Chan and colleagues, the oral LD<sub>50</sub> dose of *P. ginseng* was reported to be more than 5,000 mg/kg for mice (1, 2). In a separate study, reported in the literature of RTECS 1998 (6), the oral LD<sub>50</sub> dose for mice was 200 mg/kg of

*P. ginseng*. Based on these separate observations, Dr. Chan and colleagues pointed out that these changes in the oral LD<sub>50</sub> dose of *P. ginseng* for mice could be due to the use of different ginseng preparations or strains of test animals used in these separate studies (1). Although such observations make it difficult to compare directly the physiologic and toxicologic effects of AG/HAG and *P. ginseng*, the general consensus between both studies is that AG/HAG are only toxic at levels far above that shown to succeed in suppressing colitis and colon cancer in mice. To this end, we must point out that we used AG (*Panax quinquefolius*) extracted with 80% aqueous ethanol compared with *P. ginseng* (extracted with 75% aqueous ethanol) used in the studies conducted by Chan and colleagues (1, 2). In addition, we conducted bioassay-guided fractionation of *P. quinquefolius* with a nonpolar organic solvent; hexane to extract the lipid soluble components of AG (HAG). In conclusion, we thank Drs. Chan and Huff for directing the readers to their article and such complementary studies drive home the understanding that ginseng can suppress chronic inflammatory diseases such as colitis with no toxic side effects. However, this is only shown in mice but supports the hypothesis that ginseng may suppress colitis and prevent colon cancer in humans.

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### Disclosure of Potential Conflicts of Interest

No potential conflicts of interest were disclosed.

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