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FAHF-1 purporting to block peanut-induced anaphylaxis

To the Editor:

I have become aware of an article by Li et al¹ concerning FAHF-1 (Food Allergy Herbal Formula 1), which purports to block peanut-induced anaphylaxis in a murine model.

Peanut allergy is a major cause of fatal anaphylactic reactions to foods, as we all know, and claims by responsible scientists that there is a remedy for this are to be taken seriously.

The claim made by Li et al¹ is typical of claims made for a number of Chinese medicines; such medicines usually include more than one plant or fungal material, and the materials are mixed together for the preparation of the medicine. For example, in Vancouver's Chinatown my students check Chinese medicines that are used for sores and rashes or other skin infections. We usually find these preparations of mixed herbs to have antibiotic activities. However, when the individual components—plant or fungus—are tested, some are found to be active while others are found to have absolutely no activity whatsoever.

The reason for using a mixture of this nature is never explained. In addition to *Ganoderma lucidum*, a major Chinese medicine, the herbal formula used by Li et al¹ includes the following materials: *Aconitum*, a poisonous alkaloid-containing species; mummified prunes; *Coptis*, a source of the photosensitizers berberine and sanguinarine, which are sometimes used in Western medicine; ginger, a common spice; ginseng, a very popular Oriental medicine bristling with five membered ring compounds that has been intensely studied by Oriental and Western medical people; *Cinnamomum*, a common spice; and *Angelica*, another spice. We have absolutely no ideas about the effects of these materials on peanut anaphylaxis despite the existence of a wealth of chemical studies of the plants.

Every one of these materials, as well as the entire rest of the plant kingdom, contains phytosterols and hundreds of 4-ringed related compounds. Phytosterols, especially

β-sitosterol, are characteristic of higher plants. The main sterol in fungi is ergosterol; in animals it is cholesterol. All of these are 4-ring compounds.

I subsequently read a letter to the editor from Dr Henry Claman² of the University of Colorado School of Medicine in which he referred to the article by Li et al.¹ Dr Claman perceives a similarity between the structures of cortisone acetate and the ganoderic acids. Of course, a phytochemist with a knowledge of biochemistry would fail to see any resemblance between these 2 types of molecules, but unfortunately most medical doctors nowadays have forgotten their organic chemistry and biochemical physiology or have not kept up with it; suffice it to say that the bioactivity of cortisone acetate could never be mistaken for the bioactivities of the ganoderic acids. I will not bother to specify the details of the differences between these 2 types of triterpene derivatives.

We work on medicinal Chinese mushrooms,³ as do many organic chemists around the world. Much remains to be done. *G lucidum* is an important Oriental medicine, and to compare its mode of action in a careless way with that of cortisone acetate is really unfair.

Unfortunately, it is a casual remark like this from a renowned doctor of Western medicine that sometimes alarms the general public about traditional medicines. We do not need this.

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Reply

To the Editor:

We thank Professor Towers¹ for his comments on Dr Claman's letter² and our publication.³ We also thank Professor Towers for providing additional information supporting our response that the chemical structures of known compounds in *ling zhi* differ from those of corticosteroids.⁴ Previous publications,⁵ including ours,⁶ suggest that Chinese herbal medicines have antiallergy and anti-inflammatory properties. Although much work remains to be done before the precise mechanisms of action of herbal medicines on allergy can be understood, the effects on T cells of the *ling zhi*-containing formula differ from those of the corticosteroid dexamethasone.⁷

As emphasized by Professor Towers,¹ careful attention to chemical structures is of course essential if misleading