To the Editor:

Dr. William and LaRouque's are correct. It has been known for some time that certain saponins may receive protection against aflatoxin toxicity at modulator concentrations that do not detectably induce Phase I or Phase II activities (Takahashi et al., 1996). The purpose of our initial study (Klein et al., 2002) was to establish BHT efficacy for protection against short-term aflatoxicosis, an endpoint of particular importance in poultry. Future experiments will establish optimal doses for full protection and correlate the degree of protection with BHT effects on hepatic enzymes. As it happens, BHT induces several GST isoforms in turkey liver, but none with measurable affinity toward the AFB1,8,9-epoxide (Klein et al., 2003). The chemoprotective effect of this antioxidant more likely involves inhibition of AFB1-activating CYP450 in turkey liver (Quattricco et al., 2002). While it is certainly possible that protection in this species may be achieved with agents or doses that do not alter xenobiotic metabolizing enzymes, the implications of avoiding enzyme induction per se are relatively less important in our research than in that aimed at human health protection.

References


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