

Effects of Scopoletin and Aflatoxin B₁ on Bovine Hepatic Mitochondrial Respiratory Complexes, 2: *a*-Ketoglutarate Cytochrome *c* and Succinate Cytochrome *c* Reductases

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The *in vitro* effects of the toxin coumarin compounds scopoletin and aflatoxin B₁ (AFB₁) on bovine (*Bos indicus*) hepatic mitochondrial respiratory complex III enzymes, succinate cytochrome *c* and *a*-ketoglutarate cytochrome *c* reductases, were examined. Kinetic studies on the interaction of the toxins with the enzymes were also carried out. The results showed that although the observed inhibitory and stimulatory effects of the two toxins were consistent with the changes in the kinetic parameters (K_m and V_{max} values), these parameters were not consistent with the observed effects of the toxins at certain concentrations. These observations are discussed in terms of the relative locations of the enzymes in the mitochondria, and the previously reported inhibitory and uncoupling effects of the toxins on cow liver mitochondrial respiration.