

Influence of C-phycoerythrin on hepatocellular parameters related to liver oxidative stress and Kupffer cell functioning

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Objectives: Kupffer cells, liver macrophages involved in immunomodulation, phagocytosis, and biochemical attack, can induce cytotoxicity and inflammation when their activity is exacerbated. The aim of this study was to evaluate the effects of C-phycoerythrin on Kupffer cell functioning considering its antioxidant and anti-inflammatory properties. **Materials and methods:** Actions of C-phycoerythrin on colloidal carbon phagocytosis, carbon-induced respiratory burst activity, and sinusoidal lactate dehydrogenase (LDH) release were studied in isolated perfused mouse liver. The influence of C-phycoerythrin on tumor necrosis factor- α (TNF- α) and nitrite levels in serum and liver nitric oxide synthase (NOS) activity was assessed in rats subjected to thyroid hormone (T3) administration, a condition known to underlie hepatic oxidative stress comprising an increased Kupffer cell activity. **Results:** C-phycoerythrin elicited a concentration-dependent inhibition of carbon phagocytosis and carbon-induced O₂ up