Abstract

Crude extracts of Dracaena steudneri bark (DSB), Sapium ellipticum bark (SEB) and Capparis erythrocarsos root (CER) were investigated for their antifungal activity in immunocompromised mice infected with Candida albicans in an in vivo mice infection model. Extracts of these plant species are commonly used to treat fungal infections in East African countries. Three groups of white albino mice were immunosuppressed with 200 mg/kg body weight of cyclophosmamide for four consecutive days after which they were administered with 0.3 ml of 0.5 McFarland standard inoculum of C. albicans. The groups were treated with escalating doses of 100, 200 and 400 mg/kg of body weight of dichloromethane extracts. There was substantial dose dependency in all treatments given, with mice survival to the end of the experiment correlating well to the dose levels. At a dose of 400 mg/kg, C. erythrocarsos was the most effective with mice survival of 60% and organ burden clearance ranging from 64.0%–99.9% (P < 0.0001) in all treatments. The results revealed that C. erythrocarsos possessed significant potential for development into antifungal drugs suitable for control of Candida infections. The effectiveness of the plant extracts in vivo was a confirmation of the value of ethnopharmacological leads in drug discovery.