ABSTRACT

Nefang is a polyherbal product composed of Mangifera indica (bark and leaf), Psidium guajava, Carica papaya, Cymbopogon citratus, Citrus sinensis, and Ocimum gratissimum (leaves), used for the treatment of malaria. Compounds with antioxidant activity are believed to modulate plasmodial infection. Antioxidant activity of the constituent aqueous plants extracts, in vitro, was evaluated using the 2,2-diphenyl-1-picrylhydrazyl (DPPH), total phenolic content (TPC), and ferric reducing antioxidant power (FRAP) methods and, in vivo, Nefang (100 and 500 mg kg(-1)) activity was evaluated in carbon tetrachloride-induced oxidative stressed Wistar rats. Superoxide dismutase, catalase activities, and lipid peroxidation by the malondialdehyde and total proteins assays were carried out. P. guajava, M. indica leaf, and bark extracts had the highest antioxidant properties in all three assays, with no statistically significant difference. Rats treated with the carbon tetrachloride had a statistically significant decrease in levels of triglycerides, superoxide dismutase, and catalase ($P < 0.05$) and increase in malondialdehyde activity, total protein levels, and liver and renal function markers, whereas rats treated with Nefang showed increased levels in the former and dose-dependent decrease towards normal levels in the later. These results reveal the constituent plants of Nefang that contribute to its in vivo antioxidant potential. This activity is a good indication of the therapeutic potential of Nefang.