

ABSTRACT

Part I of this thesis examines the herbaceous plant, Justicia pectoralis (Acanthaceae), commonly called "Fresh Cut" in Jamaica. It is used in folk-medicine for the treatment of cuts and other ailments. Preliminary blood clotting studies on the plant revealed that the plant juice significantly increased clotting time. A coumarin, 2H-1-benzopyran-2-one, compound B, was found to be the major component of an acetone extract of the plant. A fatty acid ester, compound A, was also isolated. Fresh wounds created on Wistar rats and treated with the isolated coumarin, showed attenuated inflammatory process and significantly enhanced wound-healing compared with control rats. The use of this plant therefore appears to influence the wound-healing process. A further study revealed that the isolated coumarin did not contribute to the anticoagulant nature which the plant was found to possess.

Part II presents a preliminary investigation of a Jamaican mistletoe, Oryctanthus occidentalis (Loranthaceae) which is used in folk-medicine to treat hypertension. A known triterpene, compound I, was isolated. The gross structure of compound I was determined as that of the oleanane triterpene, β - amyrin acetate. Also investigated was the influence of the mistletoe on the blood pressure in 60 mongrel dogs. The results showed that oral application of the decoction prepared from the plant, produced a significant increase in blood pressure at high

doses and at low doses, the rise was insignificant. This finding suggests that this medicinal plant contains active principles which are capable of raising the blood pressure, a property opposite to that attributed to it. It was also observed that intravenous administration of the plant decoction produced a hypotensive effect, but this is not the way in which the plant is used in folk-medicine.