

P19: PHARMACOLOGICAL EFFECTS OF *ANTIDESMA ACIDUM*

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ABSTRACT

Experimental studies were conducted to elucidate various pharmacodynamic effects of an ethanolic extract of dried root of *Antidesma acidum* (Mamao) in whole animals as well as in tissues or organs preparations isolated from appropriate animals including, guinea pigs, rats and mice. The studies covered the tests on central nervous, cardiovascular, respiratory, hematological, and gastrointestinal systems. Quality specifications of plant materials and the ethanolic extract of *Antidesma acidum* were determined according to WHO Guidelines. The extract of *Antidesma acidum* solubilized in 5% tween was used in all experiments. The extract was fed orally to conscious rats at the doses of 30, 60, and 120 mg/kg/BW once daily for 7 days. Blood samples taken at day 0 and day 7 was analyzed for blood components. The results showed that the extract at 60mg, and 120mg/kg/BW increased the white blood cells (WBC) but not increased other blood components. In Rotarod test, the extract was given orally to mice at the doses of 30mg, 60mg, and 120mg/kg/BW, it was found that up to 5 hours, mice could maintain their equilibrium for at least 1 min on the rotating rod in each of three successive trials. The extracts of *Antidesma acidum* pretreated intraperitoneally at the doses of 30 - 120mg/kg/BW did not prolong barbiturate-induced sleeping time in rats. The extracts of *Antidesma acidum* at the dose of 120mg/kg/BW fed orally tended to decrease the distance of charcoal movement from duodenum to ileo-caecal junction in conscious rats. The extract of *Antidesma acidum*, at the concentrations of 100, 200 and 400µg/ml, significantly decreased the contraction of isolated rat ileum induced by 1×10^{-6} M of methacholine. The extract of *Antidesma acidum* at the concentrations of 50, 100, 200 and 400 µg/ml did not significantly affect the contractions of right auricle isolated from rats, as well as the contraction of isolated rat aorta induced by 1×10^{-6} M of norepinephrine and the contraction of isolated guinea-pig trachea induced by 1×10^{-6} M of histamine. In conclusion, the increase in white blood cells (WBC) induced by the extract of *Antidesma acidum* was similar to our previous in vitro study showing immunomodulating potential. The decrease in intestinal contraction by which mechanisms to be further studied. Whereas the extract of *Antidesma acidum* had little or no effects on isolated heart, aorta and trachea.

Key words: *Antidesma acidum*, pharmacodynamic effects