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## African tea leaf (*Vernonia amygdalina*) extract decreased blood glucose levels: An experimental study using diabetic mice

Rizki Dwayana Putra and Ervin Maulana  
Andalas University, Indonesia

Diabetes Mellitus (DM) is a metabolic disease that occurs due to abnormalities in insulin secretion and/or action. African tea leaf (*Vernonia amygdalina*; VA) extract had been investigated considered for diabetes therapy due to its ability for helping pancreatic cells to synthesize insulin, as well as protecting them from degenerative and oxidative processes. The purpose of this study was to determine the effect of VA extract for decreasing blood glucose levels in alloxan-induced diabetic mice (*Mus musculus*). We used 15 male albino Swiss Webster mice, weighing 20-30 grams, which were divided into three groups: Control group (K1), intraperitoneal single dose alloxan induction (150 mg/kg bw) with (P) and without (K2) *Vernonia amygdalina* 96% alcohol extract supplementation (200 mg/kg bw). Alloxan was induced to K2 and P in first day and tested after five days. *Vernonia amygdalina* extract was administered to P for next ten days twice a day and was provided before fasting. We used one-way ANOVA and post-hoc LSD test with  $p < 0.05$  for between-group comparisons. We observed an increase in average fasting blood glucose levels in K2 and P after alloxan induction:  $152.20 \pm 15.30$  mg/dl and  $175.00 \pm 44.44$  mg/dl, respectively, compared to K1 ( $80.60 \pm 23.38$ ). Glucose levels were significantly different both in K1 to K2 and K1 to P ( $p < 0.05$ ), while not significantly different between K2 and P. After the VA extract administration, the average fasting blood glucose levels in P were significantly decreased ( $100.60 \pm 6.15$  mg/dl) compared to K2 ( $435.80 \pm 139.82$  mg/dl;  $p < 0.05$ ). Glucose levels were significantly different between K1 ( $76.60 \pm 8.30$  mg/dl) and K2 ( $435.80 \pm 139.82$  mg/dl), while not significantly different between P and K1. VA extract showed a favorable effect on glucose metabolism in mice alloxan-induced diabetes model.

dwayanarizki@gmail.com