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Title	Nephrotoxicity study of <i>Mitragyna speciosa</i> leaf extract in Mice
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ABSTRACT

Mitragyna speciosa (Kratom) is chewed and consumed in the form of fresh leaves and beverages. This research investigated the nephrotoxicity of methanol-treated *Mitragyna speciosa* leaf extract in mice. The Mice were randomly divided into 4 groups of 6 each. Group 1 animals were fed normal food and water. Groups 2 - 4 animals were fed *Mitragyna speciosa* leaf extract at the doses of 200, 600, and 1,200 mg/kg once a day for 28 days, respectively. The results showed that after 28 days of daily oral administration of Kratom extract at 200, 600, and 1,200 mg doses, the kidney weight to body weight ratio of all groups tested was lower than the normal control group but not significantly different. The biochemical blood markers of renal function, including BUN and creatinine, were within the normal range. The study results suggest that methanol extracts of Kratom leaf may not be harmful to the kidney. Additionally, the study also found that the phytochemicals present in Kratom leaf extract, including tannin, flavonoids, saponin, and alkaloids, have potential human health benefits.