

## **Abstract**

Ethnopharmacological relevance: *Markhamia tomentosa* (Benth.) K. Schum Ex Engl. (Bignoniaceae) is used in traditional African medicine for the treatment of diarrhoea, oedema, pain and malaria. The leaf extract was reported to show no visible sign of toxicity on acute exposure. This present study investigates the sub-acute and chronic toxicity effects of *Markhamia tomentosa* in rats.

Materials and methods: The animals (n<sup>1</sup>/46/group) were treated daily with the extract at doses of 40, 200 and 1000 mg/kg orally for 28 and 90 days. Control rats received distilled water and all animals were weighed at 7 days interval. The haematological, biochemical and histological parameters were de-termined.

Results: The extract showed non-significant changes in body weight gain of treated compared to control rats in both studies. Extract significantly decreased red blood cell (RBC), mean cell haemoglobin concentration and increased mean corpuscular volume (MCV) parameters after the 28 day study. In the 90 day study, a significant increase in white blood cell, RBC, platelets and decrease in MCV and mean cell haemoglobin (MCH) parameters were observed. Biochemical parameters were significantly changed in both studies; triglycerides, total protein, alanine transaminase, aspartate transaminase and albumin showed significant increase while creatinine, blood urea nitrogen and uric acid levels showed significant decrease. Significant increase in liver weight with no treatment-related histological changes was observed in all harvested vital organs.

Conclusion: *Markhamia tomentosa* extract elicited non-toxic effect in the liver and kidney function parameters in rats. Thus, the extract is safe when administered orally.