

## Toxicological studies of *Turraeanthus mannii* (Meliaceae)

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**Received:** 21 April 2012, **Revised:** 5 May 2012, **Accepted:** 6 May 2012

### Abstract

The present study investigated the acute (single oral administration) and subacute (during 8 weeks) toxicity of aqueous extract of stem bark of *Turraeanthus mannii* (TM) in mice, as this species has not been adequately studied for its safety. After oral administration, the water and food intake lowered significantly ( $p < 0.001$ ) at dose  $15 \text{ g kg}^{-1}$  and  $20 \text{ g kg}^{-1}$  and consequently had significant effect with  $P < 0.01$  in body weight. There were no significant difference concerning triglyceride level, haematological parameters, relative weight of organs (liver, kidney, lungs, testis, ovaries) and usual liver markers (ALT, AST, Gamma-GT). The  $LD_{50}$  of TM-extract in mice was  $20.4 \text{ g kg}^{-1}$ . The level of serum protein enhanced significantly at doses  $15 \text{ g kg}^{-1}$  and  $20 \text{ g kg}^{-1}$  with  $p < 0.01$ , while serum creatinine increased at dose  $15 \text{ g kg}^{-1}$  and  $20 \text{ g kg}^{-1}$  with  $p < 0.05$ . LDL cholesterol, HDL cholesterol and Total cholesterol level of treated animals lowered at all doses with  $p < 0.05$ . The histology of lungs, liver, kidney of treated animals did not presented morphological changes (data not shown). In subacute treatment, the body weight decreased at dose  $4 \text{ g kg}^{-1}$  and  $10 \text{ g kg}^{-1}$  with  $p < 0.05$  in both sex. Other toxicological parameters was almost the same as in acute treatment except the significant increase of triglyceride at dose  $4 \text{ g kg}^{-1}$  with  $p < 0.05$ , inflammation and leucocytes infiltration of lungs and liver. The results suggest that plant is not toxic, but high dose and long term use of TM-extract could cause damage to vital organs.

**Keywords:** *Turraeanthus mannii*, acute and subacute toxicity; histopathology

### Introduction

A large majority of the world's population is using herbal medicines, one of the most important sources of active biological substances with therapeutic potential to cure human