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Toxicity study of *Phaleria macrocarpa* (Scheff.) Boerl

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Acute toxicity of a single oral dose (5000 mg/kg/b.w) (max. dose) of *Phaleria macrocarpa* (Scheff.) Boerl. (PM) fruits (mesocarp & pericarp) ethanolic extract was evaluated by *in vivo* and MTT-assay by cell line study with different concentrations. In the *in vivo* study, a total of twelve healthy adult male rats (Sprague-Dawley) 8-12 weeks weighing from 180 to 200 gm were obtained from the Laboratory Animal Centre, Universiti Putra Malaysia (UPM), Serdang, Selangor, Malaysia. Ethanolic extract of the (PM) fruits was obtained based on the procedure described by the revised UP and Down method (OECD, 425). Group-I (Control- 10% normal saline) and Group- II (treated+ PM) consist of six rats of each group. The rats were fasted (16 h) overnight and the body weight (gm) of each rat was recorded prior to the test. A fixed dose of PM fruits extract (5000 mg/kg/b.w) was administered orally to each rat and observed closely at 4 h initially, then every 6 h intervals for changes. MCF-7 cells were used in the MTT-assay in cell lines study. *In-vivo* biochemical aspects for the treated animals' serum values were similar to the control animals. Results on histological studies of liver showed that there was no periportal necrosis of the hepatocytes and no inflammation of lymphocytes and macrophages in both control and treated groups. No difference was observed in glomeruli or any other segment of kidney tubules when compared with their respective normal rats. Similarly, *in vitro* cytotoxicity study showed that the percentage of cell viability was 56.65% (5.00 µL) and 95.62 (0.31 µL) but the percentage of cell viability was 106.23% at concentration of 1.25 µL. Findings of the present study suggest that the ethanolic extract of (PM) fruits at the dose of 5000 mg/kg/b.w (maximum) non-toxic and it could be used in the next step research for animal or cell lines study.

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