

Cytotoxic and Anti-inflammatory activities of *Garcinia xanthochymus* extracts on cell lines

ABSTRACT

Objective: *Garcinia xanthochymus* extract has been reported to have several pharmacological properties. This study was conducted to evaluate cytotoxic and anti-inflammatory activities of *G. xanthochymus* extracts on cell lines. **Methods:** The roots and stem barks of plant were extracted using maceration method with n-hexane, dichloromethane and methanol, successively. Cytotoxic activity of the extracts was tested against MCF-7 breast adenocarcinoma using MTT assay. Anti-inflammatory study was evaluated using RAW 264.7 mouse macrophage cells. The nitric oxide production in LPS-stimulated cells was measured using Griess reagent. **Results:** The results of cytotoxic and anti-inflammatory study showed that dichloromethane and n-hexane extracts of root and stem bark exhibited cytotoxic activity in dose-dependent manner. Meanwhile, for anti-inflammatory study, all root extracts together with stem bark dichloromethane and n-hexane extracts reduce NO production in LPS-stimulated cells in dose dependent manner. **Conclusions:** This finding indicated that *G. xanthochymus* extracts might become interesting candidate for treatment of cancer and inflammation.

Keyword: *Garcinia xanthochymus*; Guttiferae; Cytotoxicity; Anti-inflammatory; In vitro