Cytotoxic and anti-inflammatory activities of garcinia xanthochymus extracts on cell lines / Hanisuhana Hamidon, Muhammad Taher, Juliana Md Jaffri, Tg Muhamad Faris Syafiq Tg Zakaria, Wan MAW Sulaiman, Deny Susanti, Solachuddin JA Ichwan, Zainul A Zakaria

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Abstrak

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 antiinflammatory
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.