

Cytotoxic Activity against Hepatocarcinoma and Cholangiocarcinoma Cells of Four Cathartic Herbal Medicines

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Abstract : Liver cancer has the highest prevalence rate in the North and Northeast of Thailand. Four Thai medicinal plants such as resin of *Ferula asafoetida* Regel, latex of *Aloe barbadensis* Miller leaves, roots of *Baliospermum manotatum*, and latex of *Garcinia hanburyi* Hook are used in Thai traditional medicine as cathartic drug and detoxification in liver cancer patients. Thus, this research aimed to evaluate the cytotoxic activity of these plants against hepatocarcinoma (HepG2) and cholangiocarcinoma (KKU-M156) cells by SRB assay. These plants were macerated in 95% ethanol. The results showed that roots of *Baliospermum manotatum* and latex of *Garcinia hanburyi* Hook showed the strongest cytotoxicity against HepG2 ($IC_{50} = 3.03 \pm 0.91$ and $0.62 \pm 0.01 \mu\text{g/ml}$, respectively) and KKU-M156 ($IC_{50} = 0.978 \pm 0.663$ and $0.006 \pm 0.005 \mu\text{g/ml}$, respectively). Latex of *Garcinia hanburyi* Hook also showed high cytotoxicity against normal cell line ($IC_{50} = 8.86 \pm 0.31 \mu\text{g/ml}$), and even though its selective values are high, dose of this herb should be limited.

Keywords : cholangiocarcinoma, cytotoxic activity, *Garcinia hanburyi* Hook, hepatocarcinoma

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