Anti-proliferative effects of pandan leaves (Pandanus amaryllifolius), kantan flower (Etlingera elatior) and turmeric leaves (Curcuma longa).

ABSTRACT

Purpose – The purpose of this paper is to screen cytotoxic activities of commonly used culinary plants in Malaysia, Pandanus amaryllifolius (daun pandan), Curcuma longa (turmeric leaves) and Etlingera elatior (kantan flower) against selected cancer cell lines. Design/methodology/approach – Plant samples were extracted exhaustively with ethanol and concentrated under rotary evaporator. Cytotoxic evaluation was carried out with plant extracts (0-100mg/ml) using 72-h MTT assay. Findings – Exposure of plant extracts reduced cell viability of HepG2 (hepatocellular carcinoma), HT-29 (colon carcinoma), MDA-MB-231 (non-hormone-dependent breast cancer), MCF-7 (hormone-dependent breast cancer) and HeLa (cervical cancer); 50 percent inhibitory values (IC50) were obtained for MDA-MB-231, HepG2, HT-29. Extracts within the concentrations of 10-100mg/ml were found not to be effective against proliferation of MCF-7 and HeLa.

Keyword: Curcuma longa; Cytology; Cytotoxic effect; Etlingera elatior; Malaysia; MTT assay; Pandanus amaryllifolius; Plants.