P3 THE CYTOTOXIC EFFECT OF THE EXTRACT FROM *MORINDA CITRIFOLIA* FRUITS IN CELL CULTURES

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Morinda citrifolia fruits (Yao in Thai) has been used for thousands of years as a source of traditional medicine and has been recently commercially processed and internationally distributed. It has been subjected to considerable its toxic effects. OBJECTIVE: To determine cytotoxic effect of the methanolic extract from *Morinda citrifolia* fruits in baby hamster kidney (BHK) cell line, African green monkey kidney (Vero) cell line and Human hepatoma (Hep) cell line. METHOD: Cultured cells were exposed to various concentrations of the extracts for periods of 24 hours. Mitomycin C, a cytotoxic drug, was used as positive control. Cell viabilities were assessed by MTT [3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide] assay. This method is a simple assay to determine the viability/number of cells in culture, through the formation of a colored product (in a mitochondria-dependent reaction) to which the cell membrane is impermeable. The median lethal concentrations (LC_{50}) of cytotoxic effect was calculated by linear regression analysis. RESULTS: Cytotoxic changes exhibited after exposure to the extract were dose dependent. The extract showed cytotoxicity to tested cells only at concentrations above 100 μg/mL LC_{50} of the extract in BHK cell, Vero cell and Hep cell were found to be 2,500, 3,000 and 5,000 μg/mL, respectively. As compared to those of mitomycin C at concentration 0.5 μg/mL showed above 77 percent of cell death. CONCLUSIONS: These results suggest that the methanolic extract of *M. citrifolia* fruits has a cytotoxic activity at very high concentration in these tested cell lines as compared with those of mitomycin C.