Research Title Cytotoxic activity of compounds from herbal plants against human melanoma cells

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Extracts of banaba or queen crape myrtle from *Lagerstroemia speciosa* (L.) Pers and dragon's blood from *Croton lechleri* have been useful in health science and cosmetic science. In this study, the cytotoxicity of extracts from banaba and dragon's blood were tested against a melanoma cell line from human skin. Melanoma cell lines C32 cells were cultured in dulbecco's modified eagle Medium (DMEM) supplemented with 10% fetal bovine serum (FBS) in 96-well tissue culture plates. Melanoma cells, the cell numbers of $4X10^4$ cells/well were cultured in each well of 96-well plate overnight at $37^{O}C$ with 5 % CO_2. The concentrations of banaba and dragon's blood extracts were 125 -2000 mg/ml (in ratios of 1:2) and one concentration of each extract was added in quadruplicate wells and incubated for 24, 48, and 72 hours. After that dead cells were washed and the remaining cells were stained with crystal violet and determined the absorbance (OD) by microplate reader at 560 nm. Percentage of cell viability was calculated from OD and the EC_{50} of extracts was the effective concentration that inhibitory 50% of cell viability. After 24, 48, and 72 hour of cytotoxic test, the EC_{50} of banaba were 400, 230, 150 µg/ml respectively. The cytotoxic concentrations, EC_{50} of dragon's blood in propanediol were 860, 800, 700 µg/ml after 24, 48 and 72 hour, respectively. The results indicate the cytotoxic concentration of banaba and dragon's blood against human melanoma cells that is useful for safety in cosmetic products.

Key Words: *Lagerstroemia speciosa* (L.) Pers, *Croton lechleri*, Cytotoxicity, Banaba, Dragon's blood, Melanoma cells