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Anticancer effect of *Trapa japonica* flerov. in MCF-7 cells

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The effect of *Trapa japonica* flerov. on the survival of MCF-7 cells was determined by 3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyl tetrazolium bromide (MTT) assay. The MTT assay is a colorimetric assay relying on the conversion of yellow tetrazolium bromide to the purple formazan derivative by mitochondrial succinate dehydrogenase in viable cells. *Trapa japonica* flerov. was freeze-dried and extracted with 80% ethanol, hexane, chlorform, butanol, and water and the extracts were dissolved in DMSO. Breast cancer (MCF-7) cells (104 cells/well) were incubated with 5 uL/mL to 20 uL/mL extract for 36 hr at 37°C. Viability was defined as the ratio (expressed as a percentage) of absorbance of treated cells to untreated cells that served as control. Yields of 80% ethanol, hexane, chlorform, butanol, and water extract were 6.38%, 0.83%, 0.13%, 1.10%, and 1.20%, respectively. The growth inhibition of breast cancer cells by 80% ethanol, hexane, chlorform, butanol, and water extract were 92%, 95%, 98%, 88%, and 94% at 20uL/mL, respectively. *Trapa japonica* flerov. extracts inhibited the growth of cells in a concentration dependent manner. These results indicated that *Trapa japonica* flerov. extract could have anticancer effect and further study is required to study anticancer effect of in vivo.