

INHIBITORY EFFECT OF WATER GARLIC EXTRACT ON HUMAN LEUKEMIA (HL-60) CELLS

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Abstract: Garlic supplementation in diet has been shown to be beneficial to cancer patients. Recently, its pharmacological role in the prevention and treatment of cancer has received increasing attention. However, the mechanisms by which garlic extract induces cytotoxic effects in cancer cells remain largely unknown. The present study was designed to use HL-60 cells as a test model to determine the cytotoxic efficacy of garlic after treatment of human leukemia cells. Human leukemia (HL-60) cells were treated with different concentrations of garlic extract for 12 hr. Live and dead cells was determined by trypan blue exclusion test using the cellometer vision. In addition, the cell viability was determined by the MTT assay. Data obtained from the trypan blue exclusion test indicated that GE significantly ($p < 0.05$) reduced the viability of HL-60 cells in a concentration-dependent manner. Similar trend was observed in the data obtained from the MTT results. Finding from the present study demonstrates that at therapeutic concentrations, garlic treatment induced cytotoxic effects in HL-60 cells.

Keywords: Garlic extract, HL-60 cells, trypan blue Test, MTT assay, cellometer vision

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