

## عنوان مقاله:

Anti-cancer effect of Acetanilide and Para-nitroacetophenone in K562 cells

## محل انتشار:

دوماهنامه بین المللی علوم کاربردی در تربیت بدنی، دوره 1، شماره 1 (سال: 1395)

تعداد صفحات اصل مقاله: 13

## نویسندگان:

Alireza ajabbas farshchi - MSc. Department of immunology, Urmia University, Urmia, Iran

Amir Valikhani - MSc. Blood transfusion research center, High institute for research and Education in Transfusion Medicine, Tehran, Iran

r Heidari barchi nezhad - MSc. Department of immunology, Urmia University, Urmia, Iran

Shirin Ferdowsi - Ph.D. Blood transfusion research center, High institute for research and Education in Transfusion Medicine, Tehran, Iran

## خلاصه مقاله:

Introduction : Leukemia is a particular type of cancer characterized by the failure of cell death or disability in differentiation of hematopoietic cells. Chronic myelogenous leukemia (CML) is the most studied kind of this cancer. In this study, anti-cancer effect of acetanilide and Para-nitroacetophenone derivatives were investigated in the human leukemia K562 cells. Material and methods: K562 cell line was cultured by initially seeding  $1 \times 10^6$  cells per milliliter in RPMI 1640 medium. Cell viability was investigated using trypan blue exclusion and MTT assays. Cell death in cancer and normal cells was quantified using propidium iodide (PI) and acridine-orange (AO) double staining. The one-way analysis of variance (ANOVA) and the Excel software were used for data analysis. Results: Acetanilide and Para-nitroacetophenone derivatives had strong fatal and concentration-dependent effect on K562 cells and caused cell death mainly through induction of apoptosis. Statistical analysis of cells under fluorescence microscope revealed significant difference in apoptotic cells populations between treated and untreated cells. Conclusion: The results of this investigation clearly indicated that Acetanilide and Para-nitroacetophenone derivatives have cytotoxic effects in the K562 cell line. This information revealed also that these compounds may prepare a new therapeutic approach for the treatment of leukemia

## کلمات کلیدی:

Anti-tumor effect, Acetanilide, Para-nitroacetophenone

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/589085>



