

عنوان مقاله:

Investigation of Antioxidant and Cytotoxicity Effects of Silver Nanoparticles Produced by Biosynthesis Using *Lactobacillus gasseri*

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خلاصه مقاله:

The biosynthesis of silver nanoparticles (AgNPs) is a new approach in nanotechnology which was optimistically implemented in medicine, food control, and pharmacology. The present study aimed to investigate the antioxidant and cytotoxicity effects of AgNPs produced by *Lactobacillus gasseri* filtrate. Also, changing color from yellow to brown confirmed the production of AgNPs. AgNPs were characterized using ultraviolet-visible spectroscopy, FE-SEM, and Fourier Transform Infrared Spectroscopy (FTIR). The antioxidant activity of AgNPs was tested using the DPPH assay. The scavenging test for DPPH showed ۱۹.۳%, ۳۲.۶%, ۴۷.۶%, ۷۳%, ۸۵.۳% at concentrations (۶.۲۵, ۱۲.۵, ۲۵, ۵۲, ۱۰۰)  $\mu\text{g/ml}$ , respectively, which proved that the scavenging percentage increased with increasing concentration. The effect of AgNPs on the chromosomal pattern was also studied. The results of the experiment of AgNPs against SK-GT-۴ cancer cells showed the toxic activity of the used particles against the strains of these human esophageal cancer cells and failed to affect normal cells.

کلمات کلیدی:

cancer cells, Chromosomal Aberrations, Nanoparticles

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