

## عنوان مقاله:

In vitro antitumor activity of patulin on cervical and colorectal cancer cell lines

## محل انتشار:

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## خلاصه مقاله:

**Background and Purpose:** Patulin is a mycotoxin produced by some molds, especially *Aspergillus* and *Penicillium*, and is responsible for mycotoxicosis in animals and humans. There is still not very detailed data about the anti-cancer potency of patulin, but some reports demonstrated that it induces cellular apoptosis and toxicity. **Materials and Methods:** To determine the efficacy of patulin as a therapeutic strategy for cervical and colorectal cancers, we investigated its effects on HeLa, SW-638, and MRC-5 cell lines. Cell lines were exposed to various concentrations of patulin (i.e., 0.5, 1, 2, and 4  $\mu\text{M}$ ), then using methyl thiazolyl tetrazolium (MTT) and bromo-2'-deoxyuridine (BrdU) assays, the rates of apoptosis and cell viability were determined. **Results:** The obtained results showed a significant reduction in cell viability and apoptosis induction in a dose-dependent manner. Among all the cell lines, the highest growth inhibition rate was obtained at the 4  $\mu\text{M}$  concentration of patulin. **Conclusion:** Our results suggested that patulin could significantly decrease tumor growth in human cervical and colorectal cancer models.

## کلمات کلیدی:

cancer, HeLa cells, Mycotoxin, Patulin

