

Effects of Ethyl Acetate Extract of Jew's Ear Mushrooms (*Auricularia auricula*) on Cytotoxic and Apoptosis of Cervical Cancer Cells (HeLa)

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First Author	
Last Author	
Authors	Ekowati, N; Maharning, AR; Ratnaningtyas, NI; Mumpuni, A; Hikam, AR;
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Abstract	<p>The increasing number of people living with cervical cancer encourages the search for bioactive compounds from natural ingredients such as macroscopic fungi that have the potential to induce apoptosis. Jew's ear fungus (<i>Auricularia auricula</i>) is an edible mushroom that is also commonly used by society for medicinal purposes including curing cancer. The study aimed to examine the cytotoxic, antiproliferative, and apoptotic effects of ethyl acetate extract from the mushroom on cervical cancer cells (HeLa) in vitro. The research consisted of experiments. Cytotoxic and antiproliferative tests were carried out using MTT (3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyl tetrazolium bromide) assay, while apoptosis test was the double staining method using acridine orange/ethidium bromide. The data of cytotoxic and antiproliferative effects were analyzed with linear regression, whereas apoptosis test result was analyzed descriptively. The results showed that the best cytotoxic effect was ethyl acetate extract of mushroom fruit body with IC₅₀ of 538 µg/ml. Antiproliferative analysis of HeLa cells showed the best inhibitory effect of the mushroom fruit body extract at 24-hour incubation time. The apoptosis test showed that HeLa cell death through apoptosis mechanisms was higher than by necrosis.</p>
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Author	Dr Dra NUNIEK INA RATNANINGTYAS, M.S