

Effectiveness of Pleurotus ostreatus Extract Through Cytotoxic Test and Apoptosis Mechanism of Cervical Cancer Cells

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Abstract	<p>Pleurotus ostreatus is a common mushroom cultivated in Indonesia, and potential properties of bioactive compounds for medicinal mushroom. This study was aimed at obtaining P.ostreatus extract bioactive compounds potential in inhibiting the proliferation of cervical cancer cells (HeLa) and evaluating the HeLa cell proliferation kinetics and HeLa cell death mechanisms. The research was beneficial in making this product can be easily applied in a more controlled industrial scale. Anticancer activity test through a cytotoxic test using the MTT [3- (4,5-dimetiltiazol-2-yl) -2.5-diphenyl tertrazolium bromide], the kinetics proliferation of HeLa cells and HeLa cell death mechanism was performed. Linear regression analysis was used to analyze the data. Ethyl acetate extract of P. ostreatus isolated from Madiun showed the best results with IC 50 = 107.59 $\mu\text{g} / \text{ml}$. HeLa cell proliferation kinetics analysis showed that the application of bioactive compounds 100 $\mu\text{g} / \text{ml}$ resulted in an increase of in death of HeLa cells along with length of incubation time. An important finding was that HeLa cells death by apoptosis was greater than by necrosis. In conclusion, the extracts of P. ostreatus has the potential to inhibit the growth of HeLa cells.</p>
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Author	Dr Dra NURAENI EKOWATI, M.S