The Cytotoxic and Apoptosis Effects of Chloroform Extracts of Auricularia auricula on Cervical Cancer Cells

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Abstract	Auricularia auricula is an edible mushroom cultivated in Indonesia that has been known to have potential properties of bioactive compounds than can be used for medicinal purpose. This study aimed to examine the cytotoxic and apoptosis effect of chloroform extract of A. auricula on cervical cancer cells in vitro. The research design was in vitro experimental research. Cytotoxic tests was using an MTT [3-(4,5-dimetiltiazol-2-yl)-2.5-diphenyl tertrazolium bromide] assay and apoptosis test was using double staining method. Test of bioactive compounds was carried out using GCMS. Cytotoxic effect were analyzed by linear regression and apoptosis test was analyzed descriptively. Chloroform extract of mycelium A. auricula showed the best results with IC50 = 264.87 Ãƒ Â,Ã,Âµg/ml. An important finding obtained after the double staining process was that chloroform extract of A. auricula can induce HeLa cells death by apoptosis. GCMS test results showed that the extracts containing limonene and piperidinone which are the anticancer bioactive compounds. In conclusion, the chloroform extracts of A. auricula has the potential to inhibit the growth of cervical cancer cells. The benefit of this study are expected to provide information about the anticancer potential of extract of A. auricula against cervical cancer cells, thus contributing to the development of alternative anticancer treatments from natural product.
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