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Abstract
Antrodia cinnamomea is well known in Taiwan as a traditional Chinese medicine, and it has been shown to exhibit antioxidant, anti-inflammatory and anticancer effects. In this study, the compounds present in A. cinnamomea mycelia were fractionated dependent upon the polarity. The mycelia were extracted with the order of hexane, ethylacetate, ethanol and water respectively. Each fration was tested for the inhibitory effect against A549 cells. The results of MTT-microculture tetrazolium assay demonstrated that the ethanol fraction (EC) had the strongest inhibitory effect on the A549 cells and could inhibit the cell growth of A549 cells in a dose dependent manner. The results of annexin V staining revealed that EC could induce the apoptosis in A549 cells with statistical signiticance ($p<0.05$). Besides, Our previous study reported that the crude ethanol extract of A. cinnamonea can diminish the expression of human galectin-1 gene. Galectin-1 has been demonstrated to bind H-RAS to stimulate the transformation. Western blot analyses demonstrated that EC could inhibit galectin-1 expression in A549 cell. The above data suggested that EC exerts the growth inhibition on human A549 lung cancer cells through the induction of apoptosis probably by inhibition of galectin-1 gene expression. EC may possess anticancer properties potentially valuable for application in drug products.
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