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Abstract
Antrodia camphorata is a kind of medicinal fungus well known in Taiwan as “niu-chang chi” or “ jang-jy”. Recently, it has been used for the treatments of many diseases due to its biological activities, such as anti-tumor, protection of liver and enhancement of immunity. In this study, we used liquid-liquid partition to roughly separate the ethanol extract of solid-state fermentation product of Antrodia camphorata. Further, the in vitro cytotoxicity on three tumor cells, A549, HCT-8, Hep G2 was used to evaluated the tumor-cell growth inhibiting capability of each fractions.
The results showed that extracts from the hexane layer have the best abilities to inhibit the growth of the aforementioned tumor cells. In this study, column chromatography (normal phase) was used to further separate extracts from the hexane layer. Fraction H6、H7、H11、H12、H13 separated from the hexane layer were demonstrated to have better efficiency on the inhibition of the growth of those three kinds of tumor cells. Next, cell viabilities of A549 were respectively 60.0 ± 3.6 % and 50.5 ± 2.2 % when the cells were co-treated with Fraction H7-3 and H7-5 , and were co-treated with Fraction H7-5 and H13-3 (50 μg/mL). In addition, the cell viabilities of HCT-8 co-treated with Fraction H7-3 and H13-3 (50 μg/mL) were 47.0 ± 2.0 % that were more effective then treated with single fraction. In conclusion, the results revealed that the interaction between constituents of Antrodia camphorate have potential to enhance the anti-tumor abilities.
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