

Efficiency of cytotoxicity against cancer cell lines and antioxidant activity from ethyl acetate extracts of *Xylaria* spp.

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Purpose: *Xylaria* is one of the largest genera in family the Xylariaceae. Many of them are capable of synthesizing bioactive compounds including antimicrobial, antioxidant and anticancer activities. Cancer is a major health issue worldwide due to the high rate of its morbidity and mortality. Then, new sources of anticancer drugs with low side-effects remain a major focus in several researchs. In the present study, ten crude extracts of *Xylaria* spp. obtained from cultural broths were screened cytotoxicity activity against different cancer cell lines and antioxidant activity.

Methods: The crude extracts of *Xylaria* spp. were tested against four different cancer cell lines which were lung (A549), liver (HepG2), cervical (Hela) and kidney (Vero) by using the MTT assay. Moreover, the DPPH scavenging assay was also examined for antioxidant activity.

Results and conclusions: The results indicated that all *Xylaria* extracts exhibited cytotoxicity against at least one kind of the cancer cell lines. The highest cytotoxicity against Hela, A549, HepG2 and Vero cell lines belonged to *Xylaria* sp. PK16-11.1. The percentages of cell inhibition were 96.56, 96.10, 91.82 and 95.46, respectively. The antioxidant activities (IC₅₀ value) of *Xylaria* extracts varied from 0.93 to 4.6 mg/mL. However, the results from this study provide valuable information of potential fungal sources for anticancer and antioxidant drug discovery in future studies.