

(4I-P2) Submission ID: IAL0029-00001

IN VITRO ANTIPROLIFERATIVE ACTIVITY OF *LAURERA* SPECIES (TRYPETHELIACEAE, PYRENUALES) CRUDE EXTRACTS AGAINST FOUR HUMAN CANCER CELL LINES

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Laurera species is a common genera of crustose lichens in Thailand, which has been reported to produce antifungal compounds and photoprotective secondary products. The chemical constituents of several lichens have been shown to have biological and pharmaceutical activity including antibacterial, antifungal, anti-proliferative and cytotoxic activity. The aim of this study is to investigate in vitro antiproliferative activity of *Laurera* species crude extracts with different solvents of increasing polarity. Four crustose lichen species, *Laurera benguelensis*, *L. madreporiformis*, *L. meristospora*, and *L. subdiscreta*, were extracted successively with chloroform and methanol using maceration process. The cytotoxic activity of the eight lichen extracts was evaluated in vitro using four human cancer cells: KB (human epidermoid carcinoma), HepG2 (human hepatocellular carcinoma) HeLa (human cervical carcinoma) and MCF-7 (human breast carcinoma) and a non-cancerous cells, Vero (African green monkey kidney cells). The inhibition of cell proliferation by crude extracts was determined by MTT colorimetric assay and g/ml. The crude chloroform extract of the four $\mu 30 \leq$ active standard value at IC_{50} crustose lichens showed against four human cancer cells (KB, HepG2, HeLa and g/ml, μ MCF-7) at the IC_{50} values of 0.3-11.0, 0.49-24.0, 0.59-19.0 and 0.9-35.5 respectively, whereas the methanolic extracts had weak activity (IC_{50} vales of g/ml) but exhibit low toxicity with normal cell than other crude $\mu 14.5-100$ g/ml). Therefore, the non-polar lichen compounds μ extracts IC_{50} vales of 45-59 showed higher antiproliferative and cytotoxic activity than polar lichen compounds. Purification and identification of the bioactive components from these active lichens are under investigation.