Anticancer Potential of Molave (Vitex parviflora Juss.) Crude Leaf Ethanolic Extract Against Lung Cancer Cells (A549 and GL01)

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Lung cancer ranks as the third leading cause of deaths in the Philippines and a major global contributor to cancer-related mortality. It is recognized that several natural products have anticancer properties. Molave (Vitex parviflora Juss.) has been utilized in traditional medicine, but there is a lack of scientific research on its effectiveness in treating cancer. The objective of this study was to assess the anticancer potential and identify the bioactive components in the extract of Molave leaves against two lung adenocarcinoma cell lines: A549 and GL01—a Filipino-derived lung adenocarcinoma. The leaves of Molave were air-dried and then extracted with 95% ethanol. The metabolite content of Molave was examined using UPLC-QTOF. The anticancer activity against A549 and GL01 cells was evaluated using the MTT assay. Metabolic analysis revealed that out of 125 distinct peaks, 44 were putatively identified. The results of the MTT tests demonstrated that Molave exhibited anticancer activity against A549 and GL01 at a concentration of 1000 µg/mL, surpassing the potency of commonly used anticancer drugs like Cisplatin and 5-fluorouracil ($P < 0.05$). However, Molave demonstrated proliferative activity at lower concentrations of 10 and 100 µg/mL. Thus, the Molave extract exhibited promising anticancer activity on lung cancer cells.

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