

**P-098: SYNTHESIS AND IN VITRO CYTOTOXIC ACTIVITY AGAINST SMALL CELL LUNG CANCER CELL OF A SESQUITERPENE LACTONE NEWLY ISOLATED FROM THE ROOT OF *LINDERA STRYCHNIFOLIA***

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In our previous investigation, we demonstrated that intake of the water extract of the root of *Lindera strychnifolia*, *Linderae Radix*, significantly induced apoptosis in lung cancer cells and prolonged survival of tumor-bearing mice. In the present study, new sesquiterpene lactones **1** and **2** were isolated from the EtOAc soluble fraction of the water extract of *Linderae Radix* through bioassay-guided fractionation and isolation methods. Two isolates showed significant cytotoxicity against the human small lung cancer cell SBC-3. Furthermore, the first total synthesis of 3-oxo- $\alpha$ H,8 $\beta$ H-eudesma-1,4(15),7(11)-trien-8,12-olide; **1**, was achieved from santonin. The IC<sub>50</sub> value of synthesized **1** against SBC-3 was one-seventh of that of cisplatin and showed less cytotoxicity against human fibroblast. Furthermore, compound **1** was also effective against cisplatin-resistant subclone of SBC-3. Therefore, compound **1** is a promising candidate for additional biological evaluation to further define their potential as a cancer chemotherapeutic agent.