

Pharmacognosy and Medicinal Plants

ISOLATION AND CHARACTERIZATION OF ANTICANCER BIOACTIVE COMPOUNDS FROM LEAVES OF CONYZA SUMATRENSIS, A PLANT REPUTED FOR ANTICANCER ACTIVITIES

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The plant *Conyza sumatrensis* is used in traditional medicine in parts of Africa for the treatment of numerous health ailments like inflammation, skin diseases as well as cancers. Bioassay guided fractionation of the methanol extract of the leaves of *Conyza sumatrensis* against breast cancer (MCF-7), lung cancer (NCI-H460) and NIH 3T3 (mouse embryonic fibroblast normal cell line) at 1-250 µg/mL was carried out. Fractions and isolated compounds were as well tested at 1-100 µg/mL and 1-100 µM against the cell lines. Extracts of *C. sumatrensis* was partitioned into aqueous and chloroform fractions and both fractions were tested for their effects on MCF-7 and NCI-H460. Further chromatographic and biological studies of the active chloroform fraction yielded two compounds whose identities

were revealed as Stigmasterol 3-O-beta-D-glucoside (A) and 2, 3-dihydroxypropyl hexacosanoate (B) through NMR and MS studies. These compounds were observed to give -16.50 ± 0.14 and $-21.71 \pm 0.23\%$ cytotoxicities against MCF-7 at 100 µM with GI₅₀ and TGI of 40 ± 0.10 , 50 ± 6.0 µM and 22.67 ± 1.33 and 69.33 ± 1.33 µM respectively. These compounds were also cytotoxic against NCI-H460 cell lines but less than doxorubicin, the anticancer drug used. The overall results showed that the plant can be used to prevent the proliferation of breast and lung cancer cells and hence justify the ethnomedicinal uses of the plants in treating tumour related ailments.

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