

Isolation and Characterization of Anti-melanoma (Skin Cancer) Compounds from *Corchorus olitorius* .L

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Abstract : *Corchorus olitorius* is a leafy vegetable and an industrial crop. The herb has antioxidant, anti-inflammatory, and anti-cancer properties. To assay the pharmaceutical properties, aqueous extracts of leaves and seeds from *C. olitorius* were tested against drug resistant melanoma cell line. The test showed LC50 of the extract was 0.08µg/ml. Aqueous seed extract exhibited higher melanoma inhibiting activity than leaf extract. Dialysis of seed extract showed that the active compound is less than 12 KDa. The compound with <3 KDa MW separated by microconcentration of seed extract showed 70.5 % inhibition of melanoma cell growth. Among the two fractions obtained by Gel filtration with G10 column, the first fraction at 1:2000 dilutions exhibited 100% inhibition of melanoma growth. The compound with Rf value 0.86 (MA4) isolated by TLC separation showed about 98% cytotoxicity against melanoma at 1: 1000 dilutions. Furthermore, HPLC separation of MA4 compound with Superdex 75 column resulted in 4 compounds. Out of 4, one compound showed melanoma inhibition. The active compound is identified by reagent methods as Strophanthidin. Further toxicological and clinical studies will lead to the development of a potential drug to treat drug resistant melanoma.

Keywords : *corchorus olitorius*, melanoma, drug development, strophanthidin

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