Bioassay-guided isolation of deoxypodophyllotoxin, the cytotoxic constituent of Juniperus chinensis

ABSTRACT

The ethanol extract from the leaves of Juniperus chinensis was found to be cytotoxic towards HeLa cells. Bioassay-guided fractionation of the EtOAc soluble faction directed by the microtitration cytotoxic assay revealed that the cytotoxic compound was deoxypodophyllotoxin. All the tumour cell lines tested (KU8112F-chronic mylogeneous leukemia, TK 10-renal carcinoma, UACC 62- melanoma and CEM-SS - T-lymphoblastic leukemia) were found to be susceptible to deoxypodophyllotoxin, however, the minimum effective concentration (MEC) required to reduce the cell population by 100 percent was different between cell lines.

Keyword: Cytotoxicity; Deoxypodophyllotoxin; Juniperus chinensis