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Isolation of anticancer natural ingredients from sour orange

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Abstract

Potential anticancer constituents of sour orange (*Citrus aurantium* L.) were isolated from ethyl acetate extract of sour orange. The extraction process of limonoid aglycones from sour orange seeds and peels was investigated using different solvents. Continuous Soxhlet extraction method with solvents having increasing polarities such as n-hexane, ethyl acetate, methanol and methanol/water were used. These extract fractions were processed on silica-gel column and silica-gel plate chromatography. The purity of the isolated compounds was analyzed by TLC and HPLC. Finally, UV active components were isolated and identified. The degree of isolation is followed up by thin layer chromatography (TLC) and high pressure liquid chromatography (HPLC). The identification of limonoid compounds were based on pure limonoid standard. The isolated compounds were tested for the inhibition of human prostate cancer cells. The experiments were conducted at genetic laboratory in An-Najah University. Cell proliferation, arrest of cell growth, and induction of apoptosis were determined by MTT assay. ©(2014), E-flow PDF Best Edition. All rights reserved.

Author Keywords

Anticancer; *Citrus aurantium* L; Limonoid