Abstract

Carica papaya (Caricaceae) known as paw paw or papaw, originally derived from the southern Mexico and Australia. It is presently distributed over the whole tropical area. In Jordan it is cultivated in AlGhoor. Various parts of Carica papaya have been traditionally used as ethnomedicine for a number of disorders, including psoriasis, ringworm, warts, tumors, corns and many other uses. The goal of this study is to examine the effect of the total extract of Carica papaya leaves, seeds and fruit on the growth of various tumor cell lines in addition to antioxidant activity of leaves extract.

Papaya plant parts (leaves, seeds, ripe and unripe fruit) subjected for extraction by different polarity of solvents (chloroform, methanol and ethanol). Furthermore, the plant extract was subjected to column chromatography and preparative TLC. Followed by identification for compounds by various methods of chromatography (TLC, HPLC) and chemical reagent. The biological activity were carried to estimate the antitumor activity. The acute cytotoxic effect of the extracts on human cancer cell lines was determined using MTT assays by using human melanoma (MV3, C32), breast (MDA-MB-468, MCF7), and colorectal (SW480, HCT116). The evaluation of antioxidant activity of leaves methanol extract was done by DPPH free radical scavenging method.

Plant extracts induced variable degrees of cytotoxicity against cancer cell lines due to their active constituents which were observed in different parts of the plant in addition to antioxidant activity of leaves. This is the first results belong to Carica papaya which cultivated in Jordan under different environmental conditions.

Title: Biological activity of Carica papaya grown in Jordan

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