

## عنوان مقاله:

In vitro investigating of anticancer activity of fucoxanthin from marine brown seaweed species

## محل انتشار:

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## خلاصه مقاله:

Breast cancer is the most common cancer type among women all over the world. Chemotherapy is the use of anticancer medicines for treating cancer but it has many side effects and cells may become resistant to these chemical medicines. Therefore, finding new compounds of natural origin could be a promising solution to this problem. The aim of the current study was to evaluate anticancer activity of fucoxanthin which is the most important carotenoid found in the marine brown seaweeds and diatoms. fucoxanthin has many properties (antioxidant, antibacterial, anticancer, antiobesity, anti-inflammatory and etc.) due to its unique structure. Samples with different concentrations (10, 25 and 50  $\mu\text{g/ml}$ ) and at various incubation times were collected (6, 24 and 48 hours) from four different species (Padina tenuis, Colpomenia sinuosa, Iyengaria stellate and Dictyota indica) of brown seaweeds from Qeshm Island, Persian Gulf. Moreover, the anticancer activity of fucoxanthin-containing extracts on breast cancer cells line and normal human skin fibroblast cells line was assessed by MTT [3-(4,5-dimethylthiazolyl)-2,5-diphenyl-tetrazolium bromide] assay to specify the cytotoxic effects. The results showed that fucoxanthin extract from Dictyota. indica at 24-hour treatment and 50  $\mu\text{g/ml}$  concentration has the most effective anticancer activity on the breast cancer cells line, without toxic effects to the normal cells. According to the obtained results, it seems that Dictyota. Indica is a good candidate for further analysis and can be introduced to the food and pharmaceutical industries.

## کلمات کلیدی:

Anticancer; Colpomenia sinuosa; Dictyota indica; Fucoxanthin; Iyengaria stellate; MTT [3-(4,5-dimethylthiazolyl)-2,5-diphenyl-tetrazolium bromide] assay; Padina tenuis

## لینک ثابت مقاله در پایگاه سیویلیکا:

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