

The effect of Oscillatoria Cyanobacter extract on breast cancer cell line and study of apoptosis, necrosis and noxa gene expression

hamidreza rahmatollahi*,seyed ataollah sadat shandiz,

Cancer should be the worst diagnosis anyone can get. It has many causes such as lifestyle, culture and environment. Despite the many synthetic anticancer drugs on the market, there is still a need for strong drugs of natural origin. In this regard, marine algae are considered as a phytochemicals with a high diversity of species can be helpful. Cyanobacteria Esliduria is one of the types of green-blue algae that has abundant natural resources. This algae has medicinal uses due to its toxic effects on living organisms, and antibacterial, antiviral and anti-cancer drugs has been produced by it at the experimental phase and in research laboratories. This study was examined the effect of cyanobacteria Oscillatoria on the breast cancer cell line and apoptosis, necrosis and noxa gene expression. The current study was investigated the different concentrations of the extract of this algae (1.56, 3.12, 6.25, 12.5, 25 and 50 mg / ml) within 24 and 48 hours. The results indicated that high concentrations of this extract had a significant inhibitory effect on the MCF-7 cell line, which was confirmed by flow cytometry based on apoptosis and necrosis analysis. Since the cyanobacteria extract produce toxins, thus, it should first solve these problems in order to produce drugs. As well as, due to neglect in the past and the vast variety of chemical diversity has made them counted as valuable resources in the field of various diseases, including cancer. Hence, cyanobacteria deserves more attention in practical research and pharmacy, which can be a good choice in different domains.

Keywords : Breast Cancer, Osilatria, NOXA, Apoptosis, Necrosis

[Islamic Azad University, Rasht Branch - Thesis Database](#)
[دانشگاه آزاد اسلامی واحد رشت - سامانه بانک اطلاعات پایان نامه ها](#)