عنوان مقاله:

Antibacterial and anticancer activity of a bioflavonoid fractionated from Allium Ascalonicum

محل انتشار:

دومین کنگره سالیانه کشوری دانشجویی طبری و بیست و دومین کنگره سالیانه کمیته تحقیقات دانشجویی دانشگاه علوم پزشکی مازندران (سال: 1398)

تعداد صفحات اصل مقاله: 1

نویسندگان:

Mansour Amin - *Health Research Institute, Infectious and Tropical Diseases Research Center*

Asie Varnaseri Mohammadi - *Department of Biology, Faculty of Sciences, North Tehran Branch, Islamic Azad University, Tehran, Iran*

Mohsen Heidary - *Department of Microbiology, School of Medicine, Iran University of Medical Sciences, Tehran, Iran*

Saeed Khoshnood - *Department of Microbiology, Faculty of Medicine, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran*

خلاصه مقاله:

Background and Objective: Allium ascalonicum is a part of the diet of many populations of the world due to their long-held beliefs. A. ascalonicum extracts have been reported have antibacterial properties and prevent cancer cell proliferation. This study was conducted for the purpse of evaluating the anticancer and antibacterial activity of a flavonoid fraction isolated from A. ascalonicum bulbs. Materials and Methods: The HeLa and HUVEC cells were used as target cell line and some gram negative and positive bacteria were also targeted for antimicrobial activity. The A. ascalonicum plant was collected from the Zagros Mountains in the north of Dezful city- Iran, in September 2018 and confirmed by School of Pharmacy, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran. The water extract of bulbs of this plant was extracted and the flavonoid fraction was isolated from aquous extract by ethyl acetate. The antibacterial and anticancer effects of isolated falavonoid were determined using MIC and MTT respectively. Findings: The best antibacterial effect of falvonoid extracted from A.ascalonicum was found against C. diphtheria. Furthermore, gentamicin resistant P.aeruginosa was the most resistant pathogenic bacterium. The MTT method showed that this fraction had a concentrationdependent anti-proliferative activity on HeLa cell lines and there was no cytotoxic effect against HUVEC cells. The inhibitory concentration 50% (IC50) values of the A. ascalonicum extract for Hela cell was 3 mg/mL but the treatment of HUVECs with the A. ascalonicum showed no considerable effect. Conclusion: The flavonoid fraction of A.ascalonicum bulbs had remarkable antibacterial and anticancer properties. Therefore, it could be used as an antibacterial and anticancer agent for control of cancers and infectious diseases.

کلمات کلیدی:

Anticancer; Allium ascalonicum; Allium sativum; Flavonoid