

عنوان مقاله:

An in Silico Survey on Therapeutic Products of Marine Bacteria, an Introduction for Development Approaches of Cancer Prevention and Cancer Therapy

محل انتشار:

اولین سمپوزیوم بین المللی سرطان نسترن (سال: 1394)

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خلاصه مقاله:

Anti-cancer, anti-fungal and antibiotics effects are some properties of the marine bacteria products with scientific untapped capabilities. Therefore, these bacteria and their products could be providing a major promising source for cancer therapy and cancer prevention. Bearing in mind, the assessment of therapeutic products of these bacteria and their structure, function, compound as well as critical genes, which are involved in production and effectiveness, were investigated in this study. In this regard, a comprehensive profile of marine bacteria and corresponding therapeutics products as well as related molecular mechanisms were collected, and then assessment based on statistical and in-silico analysis. Our survey revealed that these products not only have anti-cancer effects but also possess curative properties on genetics, infections, heart, gastrointestinal, autoimmunity and metabolite disorders. Meanwhile, this study showed that the most of these products which were secondary metabolites, with various compounds, could be derived from actinomycetes and cyanobacteria. On the other hand, comparative studies demonstrated that colon cancer is suitable candidate for treatment via these products. Moreover, homology and structure research of nucleotide sequences of selected genes, which were involved in metabolites production, lead to discovery a different species of bacteria with anti-cancer capacity and designing a new genetics construct for development anti-cancer probiotic strains. Taken together, the results of this research while provide a comprehensive profile of therapeutics metabolites, lead to disclose a series of bacteria with anti-cancer capacity and also a new genetics construct which ought to be more experimental analysis.

کلمات کلیدی:

Cancer, Marine Bacteria, Metabolite, Probiotic, In Silico

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