

عنوان مقاله:

An Insight into the Role of Bee Venom and Melittin Against Tumor Cells: A Review of Breast Cancer therapy

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خلاصه مقاله:

Background: Breast cancer is the most common and life-threatening cancer in females characterized by the abnormal proliferation of tumor cells in lobules and ducts. For years, many anti-breast cancer drugs have been tested with some of them showing severe health problems and drug resistance. Recently, different biological and pharmacological actions of bee venom have been indicated to play anti-bacterial, anti-viral and anti-inflammatory role against different cancers especially breast cancer. Methods: This review study is based on PubMed, Google Scholar and PubMed search. Search terms used were Melittin, Breast cancer and Honey Bee Venom. Results: Many studies have shown that a positively charged C-terminal sequence of mellitin facilitates plasma membrane contact and antitumor action. Precise targeting and selective activity of melittin has been found in recent studies as it suppresses the activation of growth factor receptors in HERY-enriched and triple-negative breast cancer that are generally difficult to treat. Significantly, it leaves healthy cells intact. The most striking feature of melittin is the pore formation property. Monomers of melittin bind to the plasma membrane of cancer cells in a collective manner and start forming pores, ultimately bringing cell lysis. Conclusion: Since melitin has a very selective action against the HER-Y related tumors, a combinational therapy of melittin and HER-Y targeted agents could be a very potent strategy in breast cancer. This .review reflects the importance of honey bee venom and melitin as a potential therapy for aggressive breast cancer.

كلمات كليدى:

Breast cancer Melittin, combinational therapy, Honeybee venom

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