

عنوان مقاله:

Anti-cancer properties of Nigella sativa

محل انتشار:

پنجمین کنفرانس بین المللی پژوهش در علوم و مهندسی و دومین کنگره بین المللی عمران، معماری و شهرسازی آسیا (سال: 1399)

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خلاصه مقاله:

The use of naturally-occurring agents to regulate Tumorigenesis is on the rise. Several herbal extracts, pure plant-derived active constituents, and food additives have been reported to possess potent anticancer properties and cancer-ameliorating effects. The wide-range anti-cancer effects of Nigella sativa, also known as black seed or black cumin, have been extensively studied using different in vitro and in vivo models. Here, we provide a comprehensive, analytical review of the reported anti-cancer properties of N. sativa seed extracts. This review focuses on analyzing experimental findings related to the ability of N. sativa to exert anti-proliferative, pro-apoptotic, anti-oxidant, cytotoxic, antimutagenic, anti-metastatic, and NK cytotoxic activity enhancing effects against various primary cancer cells and cancer cell lines. Moreover, we underline the molecular mechanisms of action and the signal transduction pathways implicated in the suppression of tumorigenesis by N. sativa. The major signaling pathway utilized by N. sativa to manifest its anti-cancer activity is the iNOS signaling pathway. This review underscores the recent developments that highlight an effective therapeutic potential of N. sativa to suppress tumor development, reduce tumor incidence, and ameliorate carcinogenesis. In sum, experimental findings reported in the last two decades strongly suggest that N. sativa fractions could serve, alone or in combination with known chemotherapeutic drugs, as effective agents to control tumor initiation, growth, and metastasis, and hence, treatment of a wide range of cancers.

کلمات کلیدی:

Nigella sativa, cancer, callus, second metabolism

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