New Complex Promises to Kill Cancer

Bhavya Khullar

A newly synthesized complex derived from a natural flavonoid could help battle out cancer, claim researchers at the Aligarh Muslim University in their recent study.

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Quercetin that has proven antioxidant and antimicrobial properties is a natural flavonoid present in apples, peppers, dark berries, citrus fruits, tomatoes and red wine.

In a recent study at the Aligarh Muslim University, researchers have synthesized a novel complex using quercetin called valine-quercetin diaorganotin (IV) that kills tumor or cancer cells. The complex inhibits topoisomerase enzymes I and II that are known to increase in tumor cells. In a normal cell, topoisomerase enzymes are essential because they modify DNA structure that enables its replication and hence, cell division. In a tumor cell however, the cell looses regulation and divides indefinitely causing cancer. The scientists tested the complex in four cancer cell lines namely cervical, hepatic, breast, and pancreatic cancer and found promising results. The complex inhibited topoisomerase enzymes causing cancer cell cycle arrest and eventually death. The scientists proclaim, "…their (the complex) potential application as topoisomerase inhibitors for the treatment of slow growing as well as rapidly proliferating tumors". The corroborative results of the study show that the complex can be used as an antitumor chemotherapeutic drug entity. Scientists across the globe are hunting for newer and better anticancer drugs. In India alone, about 7% of the population succumbs to suffering and death due to cancer.

The newly synthesized anticancer complex could help battle out cancer if delivered through efficient drug delivery platforms that could bring relief to millions of cancer patients and their caregivers.

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