

Natural extracts from marine environment : A source of anticancerous compounds

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Due to the high side effect of synthetic product researchers studied extensively on the secondary metabolites from Marine sources which can be utilized as potential drugs. Another reason for searching marine source is the biodiversity of a source which is abundant. Researchers from FAU Harbour branch able to discover drugs from marine sources which are very effective against deadly disease like Cancer, Alzheimer's disease, ocular diseases & other inflammation. Basically the secondary metabolites produced by marine animals like sponge, coral, algae are very effective. Here we can take some example: Ziconotide from cone snail used for treatment of pain (USFDA approved-2004), Trabectedin (European Union approved), spongouridine and spongothymidine from a sponge (*Cryptotheca crypts*), were used for cancer treatment. Some other antitumor compound include: Aplidine from tunicate (*Aplidium albicans*) effective against renal & medullary thyroid carcinoma & Neuro endocrine tumors, Agelasphins from an Okinawan sponge, Bryostatin I from the *Bulgula neritina*, Discodermolide, from sponge *Discodermia dissoluta*. Dolastatins from the Indian Ocean sea hare *Dolabella having anti neoplastic activity*, halichondrin (*Halichondria okadai constituent*) has tumor inhibitory activity. Spisulosine from *Spisula polynyma* has antiproliferative activity against cancer cell lines. Squalamine from the dogfish shark, (*Squalus acanthias*) has anti angiogenesis activity. Ecteinascidin from tunicate (*Ecteinascidia turbinata*) act against sarcomas. From a report of FDA Currently 2 anticancer drugs : Cytarabine & Eribulin approved by the FDA are in phase III trial, 118 Marine natural products are in preclinical trial, 22 during clinical trial & 3 on the market.

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