



# marine drugs

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*Special Issue Reprint*

## Marine Natural Products as Anticancer Agents

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Cancer remains one of the most significant threats to human health and one of the deadliest diseases worldwide, making it crucial to develop new drugs. Over the last few decades, natural products have become one of the key drivers in the development of innovative cancer treatments. Despite drug development from terrestrial resources, the marine environment only recently emerged as a prolific source of unparalleled structurally active metabolites. Due to their excellent scaffold diversity, structural complexity, and ability to act on multiple cell signaling networks involved in carcinogenesis, marine natural products (MNPs) are ideal candidates to inspire the development of novel anticancer medicines. This book gathers nine publications of the Special Issue "Marine Natural Products as Anticancer Agents," providing an excellent overview of the chemical richness offered by marine organisms, such as sponges, myxobacteria, fungi, and soft corals. MNPs or derived products belong to distinct chemical classes, including terpenoids, alkaloids, cyclodepsipeptides, polyketides, and hydroxyphenylacetic acid derivatives. These compounds modulate cancer cell mechanisms in *in vitro* and *in vivo* models, exhibiting high specificity and great affinity to interact with biological targets linked to specific intracellular signaling pathways, including mitochondrial dysfunction, autophagy, endoplasmic reticulum stress induction, apoptosis, inflammation, migration, and invasion. This volume provides an exciting overview of marine natural products as potential therapeutic agents for cancer treatment.



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