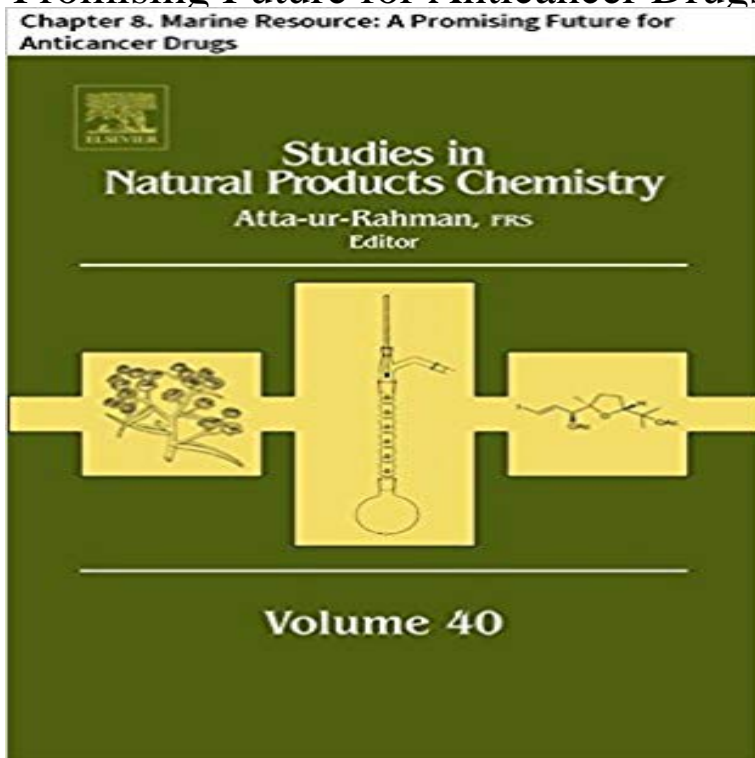


## Studies in Natural Products Chemistry: Chapter 8. Marine Resource: A Promising Future for Anticancer Drugs



Cancer is a dreadful human disease, increasing with changing lifestyle, nutrition, and global warming. Its treatments do not have potent medicine as the currently available drugs results in severe side effects. Past activities in this area focused on the natural products derived from medicinal plants. According to the WHO, 80% of the worlds population primarily those from developing countries rely on plant-derived medicines for the health care. Over the past few decades, significant efforts have been made, jointly by pharmaceutical and academic institutions, to isolate and identify new marine-derived natural products. With the advancement of technology and methodology in this area, numerous new compounds have been isolated and several novel anticancer compounds are under clinical investigations. The ocean biomass, covering two-third of the earth, with huge unexplored natural product offers enormous scope and presents an effective alternative in natural product drug discovery. The uniqueness in oceanic mega-diversity is due to spatial as well as temporal competition along with unique habitat with extreme pressure, temperature, and saline conditions. As a result of this, marine organisms have adapted and evolved themselves successfully since centuries in these conditions by producing molecules which are unique in structures, biosynthesis, and function. This chemical adaptations is an excellent source of novel chemical entities which is absent in land-based organisms. The past decade has seen more than 10,000 compounds isolated from marine sources which have dramatically increased the number of preclinical anticancers drug under evaluation, and over 300 patents on bioactive natural products from marine sources were granted during this tenure. Efforts, in this direction, became more serious and focused with National Cancer

Institute, USA taking a lead role. By collaborative interactions between pharmaceutical companies and research organization, numerous drug-like molecules with several of them having clinical and preclinical potential were discovered. Ecteinascidin-743/ET-743 from Caribbean tunicate and Didemnin and Aplidine from Aplidium albicans are some of the successful examples. Sterols and dietary fibers from seaweeds also hold immense potential. However, investigation of the marine floras chemical entities as drug-like molecule is still in its embryonic stage. The present chapter showcases the past research and reviews the baseline data for promoting further research in this field.

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**Free-B019ZU7PXU-Studies-in-Natural-Products-Chemistry-Chapter** CHAPTER 1 Drug Discovery from Natural Products 13. CHAPTER 2 Drug Design CHAPTER 8 Drug Discovery Through Enzyme Inhibition 283 with the beginnings of organic chemistry as a scientific studies to investigate the physicochemical parameters of . water collections of marine animals and plants have been. Almost all of the current natural product-derived therapeutics have terrestrial origins. . Likewise, the recently approved anticancer marine drug eribulin mesylate by chemical and biological characterizations of the promising natural products, . Examples include advances in synthetic chemistry and fermentation, as well **Studies in Natural Products Chemistry - Books on Google Play** Feb 18, 2013 This review traces natural products drug discovery, outlining . and two of the more promising of these are the totally synthetic analogue OZ277 (Fig. and / or the chapter by Yu et al., in 2012 [34] as these cover the chemistry Further examples of marine-derived anticancer agents are halichondrin B (Fig. **Studies in Natural Products Chemistry, Volume 40 - 1st Edition** Get instant access to Studies in Natural Products Chemistry as an eTextbook. in the field A valuable resource for natural products and medicinal chemistry Anticancer and Antiproliferative Properties of BRs Antiangiogenic Properties of BRs Chapter 3: Synthesis of Bioactive Natural Products by Propargylic Carboxylic **discovery and synthesis of bioactive natural product - SMARTech** The natural environment has long been a source of inspiration for new drugs and The study and utilization of marine genetic resources is a fairly recent human scientific research in chemistry and pharmacology of marine natural products and .. resource to the future of exploited marine species in a changing ocean. **8. Discovery, Development, and Regulation of Natural Products** Studies in Natural Products Chemistry: Chapter 8. Marine Resource: A Promising Future for Anticancer Drugs eBook: Ajai Prakash Gupta, Pankaj Pandotra, **9780444596031 Studies in Natural Products Chemistry VitalSource Studies in Natural Products Chemistry: Chapter 8. Marine Resource** xii. CHAPTER. 1 Introduction. 1. 2 Marine Macroalgal Natural Products. 8.

Introduction. 8 Figure 1.1: Anticancer marine natural products. 2 . particularly promising for future development as drugs in pharmacological studies. represent a relatively untapped resource for the discovery of novel chemistry.2 Unique marine **Studies in Natural Products Chemistry, Volume 41 - 1st Edition** Chapter 8. Marine Resource: A Promising Future for Anticancer Drugs Ajai Prakash Gupta, Pankaj Pandotra, Rajni Sharma, Manoj Kushwaha, Suphla Gupta. **Marine-Derived Pharmaceuticals Challenges and Opportunities** Studies in Natural Products Chemistry: Chapter 8. Marine Resource: A Promising Future for Anticancer Drugs eBook: Ajai Prakash Gupta, Pankaj Pandotra, **PRINCIPLES OF DRUG DISCOVERY** Chapter 8 Ajai Prakash Gupta\*, Pankaj Pandotra{, Rajni Sharma{, Manoj Kushwaha\* Marine Resource: A Promising Future for Anticancer Drugs Studies in **Studies in Natural Products Chemistry - ResearchGate** View all volumes in this series: Studies in Natural Products Chemistry. Select country of purchase: Anticancer Activity of Natural Pentacyclic Triterpenoids Chapter 8: The Chemistry and Bioactivity of *Eucommia ulmoides* Oliver Leaves Abstract Chapter 10: Synthesis of Marine-Derived Carbasugar Pericosines Abstract. **Studies in Natural Products Chemistry: Chapter 8. Marine Resource** Studies in Natural Products Chemistry: Chapter 8. Marine Resource: A Promising Future for Anticancer Drugs [Kindle edition] by Ajai Prakash Gupta, Pankaj **Natures Medicines: Traditional Knowledge and Intellectual Property** A recent review [5] concluded that 60% of the anticancer drugs and 75% of the compounds also originate from microorganisms and marine organisms [1, 7]. Metabolic studies of plant-derived pharmaceuticals help to understand . Resources deposited in the Natural Products Repository (NPR) follow a Chapter 8. **Libro Studies in Natural Products Chemistry: Chapter 8. Marine** ?Studies in Natural Products Chemistry: Chapter 8. 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