PREFACE

This volume of "Studies in Natural Product Chemistry" represents the 35th of this series which I initiated, the first volume of which was published in 1988. It also represents the 14th volume devoted to bioactive natural products. The first seven reviews cover interesting recent developments in the field of bioactive marine natural products. The article by Little and coworker describes synthetic approaches to thyrsiferol and its analogues along with their biological activities. Marine invertebrates such as ascidians, sponges etc. are an important source of bioactive secondary metabolites. Ueda and coworker describe the isolation, structure elucidation, bioactivity and synthetic approaches to bioactive metabolites from marine invertebrates from Okinawan waters. Another article by Martinez and coworkers describes recent developments on antiviral products from marine sources, particularly from invertebrates such as sponges, tunicates, bryozoans and molluscs as well as from marine bacteria and cyanobacteria. Kalinin and coworkers present a comprehensive review on triterpene glycosides from sea cucumbers, including their functions and biological activities. The article by Liu and coworker focuses on new compounds with anti-tumor activity, enzyme inhibitors, anti-virus and other bioactive metabolites from marine microorganism including fungi, bacteria, actinomycetes and cyanobacteria reported between 2000 and 2005. The review by Maier is concerned with biological activities of sulfated glycosides from echinoderms. It particularly focuses on the structural characteristics and biological properties of saponins isolated from starfishes and sea cucumbers in the last five years with special reference to the structural elucidation and evaluation of antifungal, cytotoxic and antiviral properties. Another interesting review by Turk and coworkers is concerned with the synthesis, biological activity and potential uses of 3-akylpyridinium and 3-alkylpyridine compounds from marine sponges.

Novel Domino reactions involving acid-catalyzed intermolecular cyclization have been used as a viable synthetic tool for the stereospecific formation of different classes of polycyclic natural products. This is discussed in the review by Bhar and coworker by using these reactions for the synthesis of bioactive diterpenoids and alkaloids. About 1/3rd of all the diseases worldwide are due to infectious diseases. There have been therefore constant efforts to discover new anti-microbial compounds that have a broad range of activities especially against multidrug-resistant strains of microbes. The article by Mahady and coworkers focuses on medicinal plants and phytochemicals active against a wide range of gram-positive and gram-negative bacteria. The potential of medicinal plants of the Anthemideae tribe, both as potential antimicrobial crude drugs as well as sources for natural compounds that act as new anti-infectious agents, is described in the review by Martinez and coworkers. The article by Maurya reviews compounds with antiosteoporotic activity. Rodrigues and coworkers have presented an interesting review of plants with possible anxiolytic and/or hypnotic effects.

Another article by Daffre and coworkers reviews recent developments in the field of bioactive natural peptides including their characterization and biological activities. Many cyclic lipopeptide antibiotics have been discovered, mainly from microorganisms, algae and plants that often exhibit interesting and useful biological activities. The article by Hashizume and coworker describes the chemistry, biological activities and pharmacology of natural cyclic lipopeptides. A large number of *Salvia* diterpenoids have exhibited interesting biological activities e.g. anti-tuberculous, antitumor, antimicrobial, antibacterial, antileishmanial and antispasmolytic activities. This is discussed in the review by

Kabouche and coworkers. Finally Rezanka and coauthor present a comprehensive review on biologically active compounds of semi-metals such as boron, silicon, arsenic, selenium and tellurium.

It is hoped that this volume will be another useful addition to this Series and be of considerable interest to a large number of scientists working on bioactive compounds with potential use in medicine.

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