

Preface

Almost three-fourths of the Earth is occupied with seawaters, which make them an unmatched resource for biologically potential materials that could prove beneficial for human health. Among the various kinds of life forms that exist in the sea, marine flora occupies the top position. Among the marine flora, marine microbes have a prominent occurrence and purpose in this area.

The bioactives from marine microorganisms include antibiotic compounds, polysaccharides, inhibitors, enzymes, peptides, and pigments. These are used in various fields of biology that range from nutraceuticals to cosmeceuticals. Recent scientific investigations have revealed that marine microbial compounds exhibit various beneficial biological effects such as anti-inflammatory, anticancer, anti-HIV, antihypertensive, antidiabetic, and several more medicinal effects. Thus, there is a greater need for knowledge and understanding the importance of the bioactive components that can be gained from marine microorganisms.

The major focus of this book is to shed light on the extraction, cleanup, and detection methods of major compounds from marine organisms. The book consists of seven chapters which are divided into two sections. Section I provides insight on bioactive marine natural products: marine microbes, seaweeds, and marine sponges as potential sources of drug discovery. Section II focuses on the analysis methods of the biocomponents from marine microorganisms—these topics can assist researchers or students to gain an understanding about current isolation and analysis methods of the bioactives.

This book aims to provide an idea about the various bioactives of marine microbes (bacteria, fungi, diatoms, and others) toward nutraceutical (and pharmaceutical) development from preliminary research to the final product.

Most chapters deal with the extraction and analysis of such bioactives in marine microbes and final products.

I have the pleasant duty to thank all the contributors of this work. Their enthusiasm has resulted in this small but excellent book.

I dedicate this volume to my five grandchildren: Fara, Fleur, Kato, Naut, and Roel.

Keep reading books, but remember that a book is only a book; and you should learn to think for yourself.

—Maxim Gorky