

New Book Received

Marine Nutraceuticals: Prospects and Perspectives. By Se-Kwon Kim, CRC Press, 2013; 464 Pages. Price £108.00, ISBN 978-1-4665-1351-8

Shu-Kun Lin

MDPI AG, Kandererstrasse 25, CH-4057 Basel, Switzerland; E-Mail: lin@mdpi.com

Received: 4 April 2013 / Accepted: 11 April 2013 / Published: 17 April 2013

The following paragraphs are reproduced from the publisher's website [1].

There is a great deal of consumer interest in natural bioactive substances due to their health benefits. Offering the potential to provide valuable nutraceuticals and functional food ingredients, marine-derived compounds are an abundant source of nutritionally and pharmacologically active agents, with both chemical diversity and complexity. Functional ingredients derived from marine algae, invertebrates, vertebrates, and microorganisms can help fill the need for novel bioactives to treat chronic conditions such as cancer, microbial infections, and inflammatory processes.

With contributions from an international group of experts, *Marine Nutraceuticals: Prospects and Perspectives* provides a comprehensive account of marine-derived nutraceuticals and their potential health benefits. These include antioxidant, anticancer, antiviral, anticoagulant, antidiabetic, antiallergic, anti-inflammatory, antihypertensive, antibacterial, and radioprotective properties. The book focuses on various types of marine-derived compounds—such as secondary metabolites like phlorotannins and fucoxanthin, carotenoid pigments, chito-oligosaccharide derivatives from chitin and chitosan, bioactive peptides, and polysaccharides—presenting an overview of their nutraceutical activities.

Chapters address neuroprotective properties of seaweeds, bioactive compounds in abalone, marine products and autoimmune disease, chitosan for weight management, anticancer actions of omega-3 fatty acids, chitosan in dentistry, and much more. The book discusses the sources, isolation and purification, chemistry, functional interactions, applications, and industrial perspectives of marine-derived nutraceuticals. The inaugural book in the new CRC Press series, *Nutraceuticals: Basic Research/Clinical Applications*, it provides a state-of-the-art reference for all readers interested in this growing field—a rich source for new compounds with promising uses in the nutraceutical, medicinal, and functional food industries.

Table of Contents

Series Preface	ix
Preface	xiii
Editor	xv
Contributors	xvii
1 Marine-Derived Nutraceuticals: Trends and Prospects	
Se-Kwon Kim and Isuru Wijesekara	1
2 Nutritional Value of Sea Lettuces	
Se-Kwon Kim and Ratih Pangestuti	5
3 Prospects and Potential Applications of Seaweeds as Neuroprotective Agents	
Se-Kwon Kim and Ratih Pangestuti	17
4 Chitosan-Based Biomaterials against Diabetes and Related Complications	
Se-Kwon Kim and Fatih Karadeniz.....	33
5 Nutraceutical Benefits of Marine Sterols Derivatives	
Se-Kwon Kim and Quang Van Ta.....	45
6 Nutritional Value, Bioactive Compounds, and Health-Promoting Properties of Abalone	
Mahanama De Zoysa	57
7 Marine Biopolymers in Asian Nutraceuticals	
Ngo Dang Nghia and Se-Kwon Kim.....	71
8 Marine Natural Antihypertensive Peptides from <i>Styela clava</i> Having Multifunctions of ACE Inhibition and NO Production in Endothelial Cells	
Seok-Chun Ko, Se-Kwon Kim, and You-Jin Jeon	87
9 Beneficial Effects of Marine Natural Products on Autoimmune Diseases	
Mi Eun Kim, Jun Sik Lee, Se-Kwon Kim, and Won-Kyo Jung.....	99
10 Extraction of Nutraceuticals from Shrimp By-Products	
Trang Si Trung and Willem Frans Stevens	115
11 Fucoidan: A Potential Ingredient of Marine Nutraceuticals	
Se-Kwon Kim, Thanh-Sang Vo, and Dai-Hung Ngo	131
12 Chitosan for Body Weight Management: Current Issues and Future Directions	
Soon Kong Yong and Tin Wui Wong	151

13 Prospects of Indonesian Uncultivated Macroalgae for Anticancer Nutraceuticals

Hari Eko Irianto and Ariyanti Suhita Dewi 169

14 Active Ingredients from Marine Microorganisms for Modern Nutraceuticals

Se-Kwon Kim and Pradeep Dewapriya 187

15 Potent Anticancer Actions of Omega-3 Polyunsaturated Fatty Acids of Marine Nutraceuticals

Kaipeng Jing and Kyu Lim 199

16 Chitosan Application in Dentistry

Yoshihiko Hayashi, Kajiro Yanagiguchi, Zenya Koyama, Takeshi Ikeda, and Shizuka Yamada 233

17 Edible Marine Invertebrates: A Promising Source of Nutraceuticals

Se-Kwon Kim and S.W.A. Himaya 243

18 Chitosan and Its Derivatives: Potential Use as Nutraceuticals

Jae-Young Je and Se-Kwon Kim 257

19 Marine Sulfated Polysaccharides with Unusual Anticoagulant Action through an Additional Unrelated-Natural Inhibitors Mechanism

Bianca F. Glauser, Paulo A.S. Mourão, and Vitor H. Pomin 267

20 Enzymatic Production of *N*-Acetyl-D-Glucosamine Using the Enzyme from the Liver of Squid

Masahiro Matsumiya 301

21 High-Density Chitin–Chitosan Production and Beneficial in Health

Siswa Setyahadi 313

22 Antioxidant Effects of Marine Food-Derived Functional Ingredients

Se-Kwon Kim, Dai-Hung Ngo, and Thanh-Sang Vo 329

23 Biological and Biomedical Applications of Marine Nutraceuticals

Janak K. Vidanarachchi, Maheshika S. Kurukulasuriya, and W.M.N.M. Wijesundara 345

24 Fucoidans from Marine Brown Macroalgae: Isolation, Identification, and Potential Biological Activities

Yasantha Athukorala and Yvonne V. Yuan 393

Index 437

Editor's Note: The brief summary and the contents of the books are reported as provided by the author or the publishers. Authors and publishers are encouraged to send review copies of their recent books of potential interest to readers of *Mar. Drugs* to the Publisher (Dr. Shu-Kun Lin, Multidisciplinary Digital Publishing Institute (MDPI), Kandererstrasse 25, CH-4057 Basel, Switzerland. Tel.: +41-61-683-77-34; Fax: +41-61-302-89-18; E-Mail: lin@mdpi.com). Some books will be offered to the scholarly community for the purpose of preparing full-length reviews.

References

1. Marine Nutraceuticals—CRC Press Book. Available online: <http://www.crcpress.com/product/isbn/9781466513518> (accessed on 4 April 2013).

© 2013 by the authors; licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/3.0/>).