

Contents

Contributors	vii
Preface	xi
Introduction	xiii
Editors-in-Chief	xvii
Volume Editors	xix

Volume 2 Natural Products Structural Diversity-II Secondary Metabolites: Sources, Structures and Chemical Biology

01 Overview and Introduction	1
Bradley S. Moore, <i>University of California at San Diego, La Jolla, CA, USA</i>	
Phillip Crews, <i>University of California at Santa Cruz, Santa Cruz, CA, USA</i>	
02 Terrestrial Plants as a Source of Novel Pharmaceutical Agents	5
Gordon M. Cragg and David J. Newman, <i>NCI-Frederick, Frederick, MD, USA</i>	
David G. I. Kingston, <i>Virginia Polytechnic Institute & State University, Blacksburg, VA, USA</i>	
03 Marine Macroalgal Natural Products	41
E. Paige Stout and Julia Kubanek, <i>Georgia Institute of Technology, Atlanta, GA, USA</i>	
04 Insect Natural Products	67
Matthew Gronquist, <i>SUNY College at Fredonia, Fredonia, NY, USA</i>	
Frank C. Schroeder, <i>Cornell University, Ithaca, NY, USA</i>	
05 Terrestrial Microorganisms – Filamentous Bacteria	109
Sheo B. Singh, <i>Merck Research Laboratories, Rahway, NJ, USA</i>	
Olga Genilloud and Fernando Peláez, <i>CIBE, Merck Sharp & Dohme de España, Madrid, Spain</i>	
06 The Natural Products Chemistry of Cyanobacteria	141
Kevin Tidgewell, Benjamin R. Clark, and William H. Gerwick, <i>University of California San Diego, La Jolla, CA, USA</i>	
07 Myxobacteria – Unique Microbial Secondary Metabolite Factories	189
Silke C. Wenzel and Rolf Müller, <i>Saarland University, Saarbrücken, Germany</i>	
08 Natural Product Diversity from Marine Fungi	223
Rainer Ebel, <i>University of Aberdeen, Aberdeen, UK</i>	
09 Bioactive Metabolites from Marine Dinoflagellates	263
Jun'ichi Kobayashi and Takaaki Kubota, <i>Hokkaido University, Sapporo, Japan</i>	

10	Marine Invertebrates: Sponges Yoichi Nakao, <i>Waseda University, Tokyo, Japan</i> Nobuhiro Fusetani, <i>Hokkaido University, Hakodate, Japan</i>	327
11	The Natural Products Chemistry of the Gorgonian Genus <i>Pseudopterogorgia</i> (Octocorallia: Gorgoniidae) Jeffrey Marrero, Ileana I. Rodríguez, and Abimael D. Rodríguez, <i>University of Puerto Rico, San Juan, PR, USA</i>	363
12	Exploiting Genomics for New Natural Product Discovery in Prokaryotes Christophe Corre and Gregory L. Challis, <i>University of Warwick, Coventry, UK</i>	429
13	Unlocking Environmental DNA Derived Gene Clusters Using a Metagenomics Approach Jeffrey H. Kim, T. Luke Simmons, and Sean F. Brady, <i>The Rockefeller University, New York, NY, USA</i>	455
14	The Chemistry of Symbiotic Interactions Jörn Piel, <i>University of Bonn, Bonn, Germany</i>	475
15	Natural Peptide Toxins Frank Mari, <i>Florida Atlantic University, Boca Raton, FL, USA</i> Jan Tytgat, <i>University of Leuven, Leuven, Belgium</i>	511
16	Cyanobactins – Ubiquitous Cyanobacterial Ribosomal Peptide Metabolites Mohamed S. Donia and Eric W. Schmidt, <i>University of Utah, Salt Lake City, UT, USA</i>	539
17	The Role of Synthesis and Biosynthetic Logic Yousong Ding and David H. Sherman, <i>The University of Michigan, Ann Arbor, MI, USA</i>	559
18	Missassigned Structures: Case Examples from the Past Decade Taro Amagata, <i>San Francisco State University, San Francisco, CA, USA</i>	581
19	Natural Products of Therapeutic Importance David J. Newman and Gordon M. Cragg, <i>NCI-Frederick, Frederick, MD, USA</i>	623
20	Natural Products as Probes of Selected Targets in Tumor Cell Biology and Hypoxic Signaling Dale G. Nagle and Yu-Dong Zhou, <i>University of Mississippi, University, MS, USA</i>	651