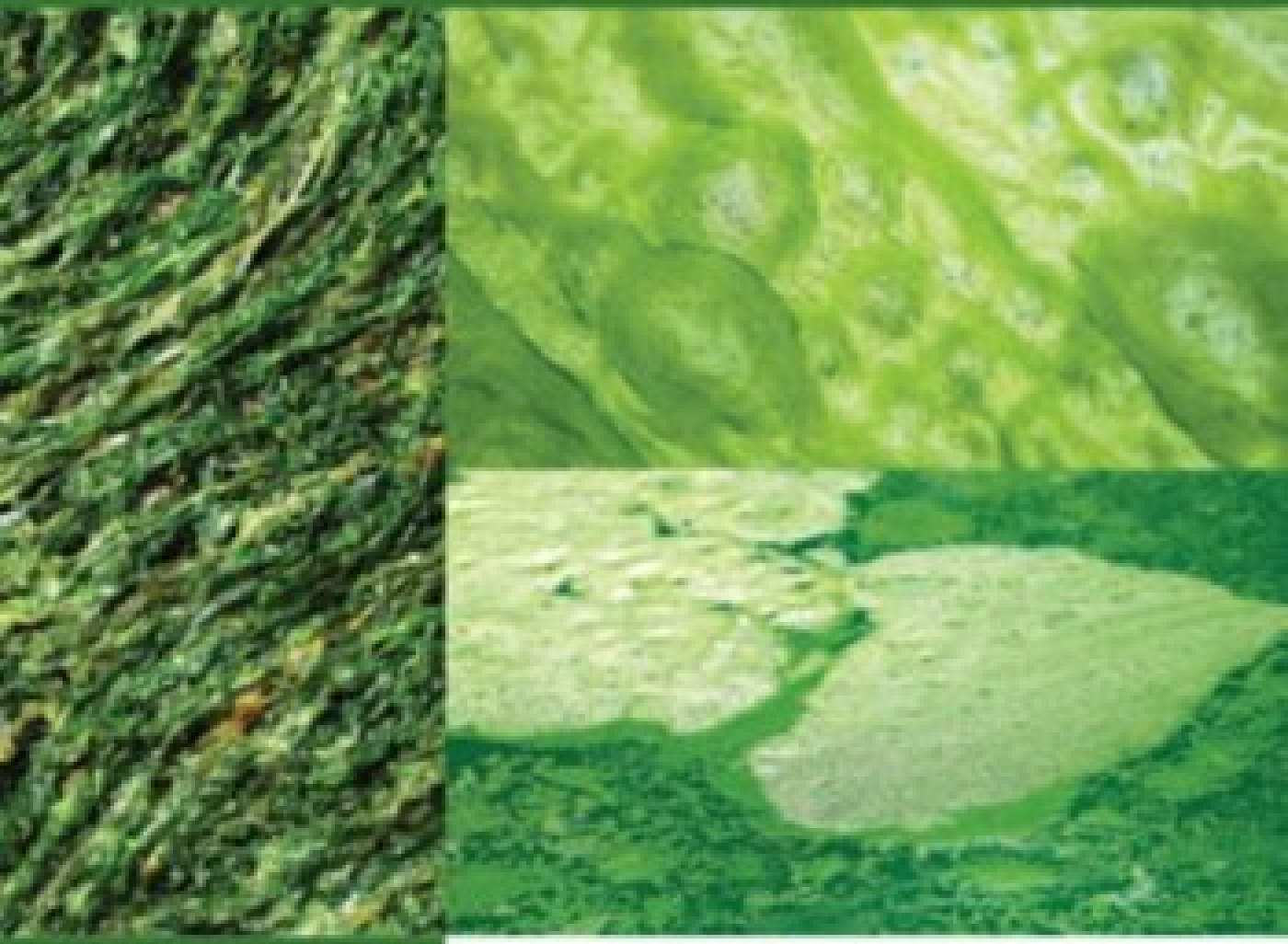
Phycotoxins

Chemistry and Biochemistry



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Chemistry and Biochemistry

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Preface

The reason for this second edition of *Phycotoxins: Chemistry and Biochemistry* is to update the information that relates to the field of marine toxins and marine compounds. Although marine toxins are usually associated with risks in food safety, there is much more to the subject than this. On the one hand, marine toxins are an excellent source of drug leads, since their structures are very diverse, ranging from very simple (domoic acid) to extremely complex (maitotoxin), and they are also a growing indicator of ecological changes caused by a changing climate. A third aspect of marine compounds and marine toxins is the vast number of physiological targets they have, which makes their study extremely interesting for research purposes once their mechanism of action is understood.

With the intention of offering a wide view of all these aspects, this book covers several topics which are of growing concern in several fields of research. Chapter 1 describes the current technical situation of the analysis of marine toxins for their control and monitoring as a food risk. Chapters 2 to 6, 14 and 15 describe mechanistic and chemical aspects of toxins of particular interest, as their presence and chemical profile may not be not well understood, or is changing in certain geographical areas. Chapters 7, 10 and 11 describe interesting aspects of toxins from freshwater, in some cases with equivalencies to marine toxins, and possible influence of climate.

The chemical diversity of marine compounds, and their mechanism of action, as well as their diversity as possible drug leads, is covered in chapters 8, 12, 13, 16 and 17. Specifically, chapter 17 describes how the elaboration of these toxins (and their stereochemistry) is so complex. Finally, chapters 18 and 19 describe special toxins in fish, and how to identify the damage caused by the marine toxins.

This book could not have been written without the generosity, talent and dedication of specialists in each field who contributed enthusiastically, giving up a large number of days to prepare each of the chapters. As editors, we wish to acknowledge their efforts and give thanks for the support they have given to this book. Without their generosity, this type of book would not be possible. So we offer a sincere 'thank you' to them all.

Finally, we wish to thank Wiley-Blackwell for believing in this project.

Amparo Alfonso and Luis M Botana