CHEMICALS FROM Perspectives on Plant Secondary Products **PLANTS**

CHEMICALS FROM PLANTS

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CHEMICALS FROM
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**CHEMICAL FROM PLANTS
PERSPECTIVES ON PLANT SECONDARY PRODUCTS**

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PREFACE

This book presents a series of review essays about plant secondary products. It makes no apology for covering topics of particular interest to the editors and to the individual authors, but in so doing it is hoped that the coverage may be more personal than is sometimes found in review articles with a principal aim of ensuring a detailed and exhaustive literature survey. Some effort has been made to collect and present material not widely reviewed elsewhere and to make it accessible to the non-specialist reader, or to the specialist in a related discipline. Inevitably, there are interesting areas which are not covered - for example, drugs of abuse, the development of phytochemically-based pest and disease control, and economic aspects of secondary-product biotechnology, to name but three. Likewise, end-products of primary metabolism, including carbohydrates and lipids, are not included. There is, however, a chapter devoted to the production of biologically-active proteins in plants and a moment of reflection will reveal that these may reasonably be considered "honorary" secondary products.

The perspective of this book is principally biochemical and phytochemical, with some emphasis on the extraction, characterisation and structure determination of secondary products, their pathways of biosynthesis, their enzymology and their applications. Plant secondary products have always been of interest in the context of pharmacognosy, but within the last fifteen years there has been a substantial growth in interest in secondary products from plant physiologists and molecular biologists interested in plant defence and in signalling processes. There is also increasing attention paid to these compounds as dietary constituents and particularly as actual or potential antioxidants. Secondary products are therefore at last widely recognised as a legitimate topic of mainstream interest, rather than as an arcane speciality. One of the purposes of this book is to provide an essentially biochemical context to these developments, directing the reader to specialised information which can be found elsewhere. The present time sees an unprecedented development of interdisciplinary science related to plants (and other organisms), when the effective study of major questions increasingly requires the complementary input of specialists in several

disciplines.

We are very grateful to all who have contributed to this volume, particularly the chapter authors for their attention to detail and not inconsiderable patience and the Scientific Editor of World Scientific, Ms Sook-Cheng Lim. We are indebted to the late Harold Woolhouse for his encouragement and suggestions at an early stage and for his lasting influence affectionately remembered. We thank present and past colleagues and visitors to Norwich for many discussions related indirectly to this book. We are grateful to Shirley Newman and Angie Fox for assistance with the artwork. Finally, we thank Ingrid Walton and James Brown for their invaluable suggestions and encouragement.

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Norwich, 1998.

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