

PREFACE

The second edition of the *Biochemistry & Molecular Biology of Plants* retains the overall format of the first edition in response to the enthusiastic feedback we received from users of the book. The first edition was organized into five sections dealing with organization and functioning of the cell (Compartments), the cell's ability to replicate (Cell Reproduction), generation of energy (Energy Flow), regulation of development (Metabolism and Developmental Regulation), and the impact of fundamental discoveries in plant biology (Plant, Environment, and Agriculture). Although the section organization of the second edition remains unchanged, many of the chapters have been written by new teams of authors, reflecting the retirement of some of our colleagues, but also the dynamic development of plant biology during the last 20 years that was driven by a cohort of younger investigators, many of whom have contributed to this second edition.

Changes in chapter authorship also reflect the impact that molecular genetics had on our field, and three chapters stand out in this regard: Chapter 9 on Genome Structure and Organization, Chapter 18 on Signal Transduction, and Chapter 19 on Molecular Regulation of Reproductive Development. Advances resulting from molecular genetics have been particularly dramatic in the field of plant hormones and other signaling molecules where the receptors for all of the major hormones and their complex signaling pathways have now been described in detail.

Soon after publication of the first edition, *Biochemistry & Molecular Biology of Plants* was translated into Chinese, Italian, and Japanese, and a special low-priced English-language version of the book was published in India. In this version the entire book was published in black and white, illustrating the costs involved in producing four-color versions of textbooks.

Another change that accompanied the writing and production of this second edition was the involvement of the publisher John Wiley and our interaction with the Editorial

Office in the United Kingdom. Wiley had entered into an agreement with the American Society of Plant Biologists to lead the publication of books written by ASPB members. The second edition of *Biochemistry & Molecular Biology of Plants* is one of the first of hopefully many books that will be published jointly by ASPB and Wiley.

Production of this book required input from many talented people. First and foremost the authors, who patiently, in some cases very patiently, worked with the editors and developmental editors to produce chapters of remarkably high quality. The two excellent developmental editors, Justine Walsh and Yolanda Kowalewski, worked to produce a collection of chapters that read seamlessly; the artist Debbie Maizels produced figures of exceptional technical and artistic quality; the staff at John Wiley, who worked tirelessly on this project; and Dr Nik Prowse, freelance project manager, who efficiently handled the chapter editing and management during the production phase of the book. Special thanks go to Celia Carden whose support, enthusiasm, and management across two continents have gone a long way to making this book successful. The support of ASPB's leadership and staff, notably Executive Director Crispin Taylor and Publications Manager Nancy Winchester, are gratefully acknowledged. We also appreciate the continuing/ongoing support that we received from ASPB as this book was being developed. The contributing authors thank reviewers for commenting on their chapters.

Most important, we want to express appreciation to our wives, Melinda, Barbara, and Frances, who during the past few years again tolerated and accepted the textbook as a demanding family member.

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November, 2014

Berkeley, CA, and Zurich, Switzerland

Note: Following the common publishing convention, species names that appear in the italicized figure legends have been set in standard roman typeface so that they are easily identifiable.