

Preface

The appreciation of orchid beauty has a long history in both western and eastern cultures. Over many years of development, the orchid has evolved such that it embraces not just the hobbyists' market but a highly commercial market, thanks to advances in techniques such as breeding, micropropagation, industrial cultivation, etc. Today, orchid cut-flowers of *Cymbidium*, *Dendrobium* and *Oncidium*, and potted plants of *Phalaenopsis* are marketed globally. It is envisaged that growing tropical orchids for cut-flower production and potted plants will benefit from the recent advances in the crop science technology. However, for the orchid industry, producing an improved orchid through biotechnology is only the beginning.

Taiwan has been the main driving force of the world's *Phalaenopsis* breeding and plant production. The orchid research program was firstly supported 10 years ago by the Taiwan Sugar Corporation for the first three years, and currently has been one of the National Science-Tech Program for Agriculture Biotechnology (NSTP.AB) for more than six years. The budgets of the NSTP.AB are founded by National Science Council, Council of Agriculture and Academic Sinica, Taiwan. The contributors to the book include researchers from the Institute of Plant and Microbial Biology, Academia Sinica, National Taiwan University, National Tsing Hua University, National Cheng Kung University, National University of Kaohsiung, and National Pingtung University of Science & Technology. We collaborate with the growers of Taiwan Orchid Plantation, a government sponsored entity, in terms of research and training, in order to bring the Taiwan orchid industry to a new level of sophistication and profitability.

This book is the first volume devoted exclusively to orchid biotechnology. It is extremely informative as it addresses many aspects of orchid biotechnology, including modern breeding (Chapters 1 and 2), *in vitro* morphogenesis (Chapter 3), somaclonal variation (Chapter 4), application of orchid mycorrhized fungi (Chapter 5), analysis of orchid genomes (Chapters 6–8) and functional genomics (Chapters 9–12), and

genetic transformation (Chapter 13). It will be a valuable guide for readers such as research workers, graduate students, people interested in orchid biology and floriculturists. Its publication will be a milestone sets the foundation for the next level of orchid research.

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The Editors