

# Preface

Following the considerable success of the Plant Virology Protocols in the Methods in Molecular Biology volume, Humana Press invited us to produce a second edition of this volume.

The first book *Plant Virology Protocols: From Virus Isolation to Transgenic Resistance* had a trend running through it, which people liked, which was – methods to isolate a virus, clone it, express it, and transform it into plants, and evaluate those plants for transgenic resistance.

For the second edition, we have decided on a different trend running through the book that is – *From Viral Sequence to Protein Function*, which will cover the many new techniques that we now can apply to analyze and understand plant viruses.

This book has been divided into five major parts, containing 44 chapters in total.

Part 1 provides a general introduction to some typical plant viral proteins, and their role in infection and interactions with other viral proteins, with the host, vectors, etc.

Part 2 provides a range of techniques for investigating viral nucleic acid sequence as well functional analysis, with Part 3 covering protein analysis and investigation of protein function.

Part 4 has a wide-ranging remit but centered on techniques for microscopy/GFP visualization and analysis/protein tagging/generation of infectious clones and other such tools.

Part 5 covers the emerging area of genomics, interactions with host factors, and plant-based studies, a theme that will probably expand over the coming years to require an entire book dedicated to this theme alone, perhaps *Plant Virology Protocols Vol 3!*

*Plant Virology Protocols* is the product of the hard work and major efforts of a large number of individuals who have been supportive and patient during the editing process. The editors would like to thank them all; we hope they and others will find the book useful and informative.

Gary Foster would like to thank, or should it be apologize to, his family (Diana, James, and Kirsty) for agreeing to take on another book, yes I know I promised I would not take another book, but this one was too nice an idea.

Yiguo Hong would like to thank Gary Foster for inviting him to become involved in this project. Thanks also go to Po Tien, Bryan Harrison, John Stanley, and

Michael Wilson who have consistently inspired him to the tiny but extremely exciting world of plant viruses. Yiguo Hong would also like to thank his family (Mei, Elizabeth, and Lucy) for their support.

Elisabeth Johansen would like to thank Gary Foster for the invitation to participate in the challenging process leading to the publication of this book. Thank you for your guidance and encouragement.

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