

Preface

The first edition of this monograph, edited by Kenneth Sink and published in 1984, effectively summarized nearly a century of research. It has provided a guide of inestimable value to the family of *Petunia* researchers for more than 20 years, over which time the nature of plant research has undergone a revolution. The fairly small but dedicated group of the mid-20th century was interested in *Petunia* primarily as a model system for physiological, biochemical, and genetic research. 1984 was still fairly early in the molecular era, particularly for plant research, but the timing was good for a comprehensive text covering areas from which molecular biology could grow. And so it grew: as evidenced in every chapter of this book, which summarizes the progress in *Petunia*-based research of the past two and a half decades, the tools of molecular biology are now standard in the biologist's tool box.

In the mid-1980s the search for “the *E. coli* of plants,” the organism to serve as the fundamental plant model system, had begun. In 1985 a meeting was organized at the University of Georgia in Athens, followed in 1987 by an EMBO-sponsored course at the Vrije Universiteit in Amsterdam on *Petunia* as a Model System. The general feeling, for reasons that emerge over and over in the present book, was that *Petunia* would be a superb choice as a plant model system. Early researchers like Bianchi, Cornu, Wiering, Maizonnier, de Vlaming and Farcy, and later ones like Benninck and Schram, had done their parts to prepare the way for using *Petunia* in molecular studies. Their work in genetics, cytogenetics, biochemistry, and physiology provided a strong foundation for molecular studies, especially on flavonoid synthesis and genome structure.

The *Arabidopsis* tide, however, had been building since the early 1980s, and by 1990 it was clear that the small, fast-cycling weed with its small genome was the model system of choice. A great number of young researchers became experts in *Arabidopsis*, and both the body of information and the available tools for *Arabidopsis*-based studies grew exponentially. The humble plant has served its role admirably and allowed for an incredible rate of progress in our understanding of many aspects of plant biology. Now there is a general surge of interest in comparative biology, and thus new model systems are again being sought. *Petunia*, as this work demonstrates, continues to offer many advantages.

Not the least of these is the spirit of the *Petunia* research community. The “First World *Petunia* Day,” a small one-day meeting pretty much restricted to researchers

from Amsterdam, Wageningen and Ghent, initiated a worthwhile tradition of bringing together *Petunia* research and researchers. Though initially a small group, the spirit was good, the thinking was large, and over the years, the meetings attracted more and more scientists. By the “Ninth WPD,” held in October 2007, more than 60 delegates joined in the informal “formal presentations” and the relaxed eating, drinking, and talking that still typify WPD meetings. It was at the “Eighth WPD,” in October 2006, that the idea for a new edition of the monograph was proposed and accepted. (A check of the *Petunia* Platform website [www.petuniaplatform.net] will provide the reader a quick introduction to the *Petunia* groups and their ongoing work.)

The fresh ideas and approaches to research, together with a continuing readiness to share, have been key to the impressive progress documented in this second edition of the monograph. A cursory look at authors and references in this work will give a hint of the extent of the collaborative spirit in the *Petunia* community. As members continue to work together to exploit the strengths of this model system, they will continue to contribute much to the development and evolution of science, particularly in the discipline of comparative biology.

We hope that this edition of the *Petunia* monograph will serve the current members of the *Petunia* research community well and help to attract yet more excellent and collaborative workers to this elegant plant system and to the community that has made it so.

The first edition of *Petunia* will be available via Springer.com!

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Petunia

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