Preface

Cytogenetics is a venerable branch of genetics concerning every aspect of chromosomes that can be observed at the microscopic level. Throughout its long history, cytogenetics has expanded to grow side by side with many other fields of biology, from cytology to evolution and breeding.

The present single topic issue of *Cytogenetic and Genome Research* on Plant Cytogenetics has been conceived to offer an ample and useful state of the art. A number of contributions are review articles that update most areas of current plant cytogenetic research. Many others are original articles with information of nearly all aspects of current investigations from laboratories all over the world, covering a representative range of wild and cultivated plant species. Some particular fields, for example plant B chromosomes, are underrepresented because they have been considered in another single topic issue of *Cytogenetic and Genome Research*.

Cytogeneticists have taken advantage of new techniques that enhance the resolution of the microscopic observation and yield more details and more depth of chromosome biology and evolution. Cytogenetics has been always characterized by exhibiting an artistic dimension inherent to the necessary drawings and photographs that illustrate the scientific results. Nowadays, this appealing aspect is highly reinforced by the combination of molecular techniques and computer photographic processing, which provides high quality colorful images. In the present single topic issue the reader will enjoy not only the science presented in the articles, but the beauty of the excellent figures.

We would like to thank Michael Schmid for his kind invitation to edit this single topic issue and his restless help throughout the editorial work. For us, it has been an enjoyable opportunity of maintaining deep scientific and friendly relationships with many colleagues. We thank all of them for their contributions and efforts that made it possible to gather this excellent compendium of current research on Plant Cytogenetics.

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