

Contents

<i>Preface</i>	v
<i>Contributors</i>	ix
1 Role of Model Plant Species <i>Richard Flavell</i>	1
2 New Technologies for Ultra-High Throughput Genotyping in Plants <i>Nikki Appleby, David Edwards, and Jacqueline Batley</i>	19
3 Genetic Maps and the Use of Synteny <i>Chris Duran, David Edwards, and Jacqueline Batley</i>	41
4 A Simple TAE-Based Method to Generate Large Insert BAC Libraries from Plant Species <i>Bu-Jun Shi, J. Perry Gustafson, and Peter Langridge</i>	57
5 Transcript Profiling and Expression Level Mapping <i>Elena Potokina, Arnis Druka, and Michael J. Kearsey</i>	81
6 Methods for Functional Proteomic Analyses <i>Christof Rampitsch and Natalia V. Bykova</i>	93
7 Stable Transformation of Plants <i>Huw D. Jones and Caroline A. Sparks</i>	111
8 Transient Transformation of Plants <i>Huw D. Jones, Angela Doherty, and Caroline A. Sparks</i>	131
9 Bridging the Gene-to-Function Knowledge Gap Through Functional Genomics <i>Stephen J. Robinson and Isobel A. P. Parkin</i>	153
10 Heterologous and Cell-Free Protein Expression Systems <i>Naser Farrokhi, Maria Hrmova, Rachel A. Burton, and Geoffrey B. Fincher</i>	175
11 Functional Genomics and Structural Biology in the Definition of Gene Function <i>Maria Hrmova and Geoffrey B. Fincher</i>	199
12 In situ Analysis of Gene Expression in Plants <i>Sinéad Drea, Paul Derbyshire, Rachil Koumproglou, Liam Dolan, John H. Doonan, and Peter Shaw</i>	229
13 Plant and Crop Databases <i>David E. Matthews, Gerard R. Lazo, and Olin D. Anderson</i>	243
14 Plant Genome Annotation Methods <i>Shu Ouyang, Françoise Thibaud-Nissen, Kevin L. Childs, Wei Zhu, and C. Robin Buell</i>	263

15	Molecular Plant Breeding: Methodology and Achievements	283
	<i>Rajeev K. Varshney, Dave A. Hoisington, Spurthi N. Nayak,</i> <i>and Andreas Graner</i>	
16	Practical Delivery of Genes to the Marketplace	305
	<i>David A. Fischhoff and Molly N. Cline</i>	
17	Ecological Genomics of Natural Plant Populations: The Israeli Perspective	321
	<i>Eviatar Nevo</i>	
18	Genome Sequencing Approaches and Successes	345
	<i>Michael Imelfort, Jacqueline Batley, Sean Grimmond,</i> <i>and David Edwards</i>	
	<i>Index</i>	359