

Contents

<i>Preface</i>	vii
<i>Contributors</i>	xi
 PART I TRANSGENESIS IN VARIOUS MODEL SYSTEMS	
1. Transgenesis in <i>Drosophila melanogaster</i> <i>Leonie Ringrose</i>	3
2. Transgenesis in <i>Caenorhabditis elegans</i> <i>Matthias Rieckher, Nikos Kourtis, Angela Pasparaki, and Nektarios Tavernarakis</i>	21
3. Transgenesis in Zebrafish with the Tol2 Transposon System..... <i>Maximiliano L. Suster, Hiroshi Kikuta, Akibiro Urasaki, Kazuhide Asakawa, and Koichi Kawakami</i>	41
4. Generation of Transgenic Frogs..... <i>Jana Loeber, Fong Cheng Pan, and Tomas Pieler</i>	65
5. Pronuclear DNA Injection for the Production of Transgenic Rats..... <i>Jean Cozzi, Ignacio Anegón, Valérie Braun, Anne-Catherine Gross, Christel Merrouche, and Yacine Cherifi</i>	73
 PART II TRANSGENESIS IN THE MOUSE	
6. Cell-Type-Specific Transgenesis in the Mouse..... <i>James Gulick and Jeffrey Robbins</i>	91
7. Transgene Design and Delivery into the Mouse Genome: Keys to Success..... <i>Lydia Teboul</i>	105
8. Overexpression Transgenesis in Mouse: Pronuclear Injection..... <i>Wendy J.K. Gardiner and Lydia Teboul</i>	111
9. Gene-Targeting Vectors..... <i>J. Simon C. Arthur and Victoria A. McGuire</i>	127
10. Gene Trap: Knockout on the Fast Lane..... <i>Melanie Ullrich and Kai Schub</i>	145
11. Culture of Murine Embryonic Stem Cells..... <i>Ivana Barbaric and T. Neil Dear</i>	161
12. Targeting Embryonic Stem Cells..... <i>Roland H. Friedel</i>	185
13. Generation of Chimeras by Microinjection..... <i>Anne Plück and Christian Klasen</i>	199

14.	Generation of Chimeras by Morula Aggregation	219
	<i>Anne Plück and Christian Klasen</i>	
15.	Surgical Techniques for the Generation of Mutant Mice	231
	<i>Anne Plück and Christian Klasen</i>	
16.	Site-Specific Recombinases for Manipulation of the Mouse Genome.	245
	<i>Marie-Christine Birling, Françoise Gofflot, and Xavier Warot</i>	
17.	Cre Transgenic Mouse Lines	265
	<i>Xin Wang</i>	
18.	Large-Scale Mouse Mutagenesis	275
	<i>Elizabeth J. Cartwright</i>	
19.	Dedicated Mouse Production and Husbandry	285
	<i>Lucie Vizor and Sara Wells</i>	
20.	Biological Methods for Archiving and Maintaining Mutant Laboratory Mice. Part I: Conserving Mutant Strains	301
	<i>Martin D. Fray</i>	
21.	Biological Methods for Archiving and Maintaining Mutant Laboratory Mice. Part II: Recovery and Distribution of Conserved Mutant Strains	321
	<i>Martin D. Fray</i>	
	<i>Index</i>	333