
Contents

Preface	v
Contributors	xiii
1 Markers, Selection, and Media in Yeast Artificial Chromosome Cloning <i>David Markie</i>	1
2 Construction of Yeast Artificial Chromosome Libraries From Pathogens and Nonmodel Organisms <i>Cecilia P. Sanchez and Michael Lanzer</i>	13
3 Analysis and Screening of Yeast Artificial Chromosome Libraries by Filter Hybridization <i>Cecilia P. Sanchez and Michael Lanzer</i>	27
4 Analysis of Yeast Artificial Chromosome DNA by Restriction Digestion, Southern Blotting Nucleic Acid Hybridization, and Polymerase Chain Reaction <i>Sylvia Vasiliou and John Peter Quinn</i>	33
5 Postgenomic Bioinformatic Analysis of Yeast Artificial Chromosome Sequence <i>Kerry Miller, Scott Davidson, and Alasdair MacKenzie</i>	41
6 Transformation of Yeast Using Bioactive Beads With Surface-Immobilized Yeast Artificial Chromosomes <i>Shigeki Kawakami, Satoshi Harashima, Akio Kobayashi, and Kiichi Fukui</i>	61
7 Modification and Amplification of Yeast Artificial Chromosomes <i>Sanbing Shen, Anthony Harmar, and Nick Hastie</i>	67
8 Modifying Yeast Artificial Chromosomes to Generate <i>Cre/LoxP</i> and FLP/FRT Site-Specific Deletions and Inversions <i>Gabriela G. Loots</i>	75
9 Selective Isolation of Large Chromosomal Regions by Transformation-Associated Recombination Cloning for Structural and Functional Analysis of Mammalian Genomes <i>Natalay Kouprina, Vladimir N. Noskov, and Vladimir Larionov</i>	85

10	A Polymerase Chain Reaction-Mediated Yeast Artificial Chromosome-Splitting Technology for Generating Targeted Yeast Artificial Chromosomes Subclones Yeon-Hee Kim, Minetaka Sugiyama, Yoshinobu Kaneko, Kiichi Fukui, Akio Kobayashi, and Satoshi Harashima	103
11	Genomic Reconstruction by Serial Mitotic Recombination of Yeast Artificial Chromosomes David Markie, Emma Jones, and Jiannis Ragoussis	117
12	Targeting Vector Construction by Yeast Artificial Chromosome Modification Peter J. Murray.....	127
13	Production of Yeast Artificial Chromosome Transgenic Mice by Pronuclear Injection of One-Cell Embryos Alasdair MacKenzie	139
14	Generation of Yeast Artificial Chromosome Transgenic Mice by Intracytoplasmic Sperm Injection Pedro N. Moreira, Julio Pozueta, Patricia Giraldo, Alfonso Gutiérrez-Adán, and Lluís Montoliu	151
15	Establishment of Cell Lines That Exhibit Correct Ontogenic Stage-Specific Gene Expression Profiles From Tissues of Yeast Artificial Chromosome Transgenic Mice Using Chemically Induced Growth Signals C. Anthony Blau and Kenneth R. Peterson	163
16	Application of Yeast Artificial Chromosomes in Fluorescence <i>In Situ</i> Hybridization Thomas Liehr	175
17	Contribution of Yeast Artificial Chromosome-Based Physical Maps to the Final Assembly of the <i>Trypanosoma cruzi</i> Genome Márcia R. M. Santos, Roberto R. M. Barros, Patrício E. Porcile, Mariano J. Levin, and José Franco da Silveira	187
Index		199