

Plant Cytogenetics

[DOWNLOAD HERE](#)

1;Plant Cytogenetics;3 1.1;Preface;5 1.2;Contents;7 1.3;Contributors;9 1.4;PartI: Structure, Variation, and Mapping in Plant Cytogenetics;11 1.4.1;Chapter 1: Plant Chromosomal Deletions, Insertions, and Rearrangements;12 1.4.1.1;1.1 Introduction;13 1.4.1.2;1.2 Deletions/Deficiencies;13 1.4.1.3;1.3 Insertions/Duplications;16 1.4.1.4;1.4 Chromosomal Rearrangements;21 1.4.1.4.1;1.4.1 Inversions;21 1.4.1.4.2;1.4.2 Reciprocal Translocations;27 1.4.1.4.3;1.4.3 Maize B-A Chromosomes and Their Uses;36 1.4.1.5;References;40 1.4.2;Chapter 2: Genome Structure and Chromosome Function;46 1.4.2.1;2.1 Plant Chromosome Addition;47 1.4.2.2;2.2 Native Addition Lines;47 1.4.2.3;2.3 Alien Addition Line;49 1.4.2.4;2.4 Substitution Line;53 1.4.2.5;2.5 Deletion Line;58 1.4.2.6;References;60 1.4.3;Chapter 3: Plant B Chromosomes: What Makes Them Different?;68 1.4.3.1;3.1 Introduction;69 1.4.3.2;3.2 Occurrence of B Chromosomes Among Angiosperms;69 1.4.3.3;3.3 What Does DNA Analysis Tell Us About the Origin of Bs?;70 1.4.3.4;3.4 Do the Chromatin Compositions of As and Bs Differ?;73 1.4.3.5;3.5 Segregation Behavior of B Chromosomes;75 1.4.3.6;3.6 Centromeres of B Chromosomes;78 1.4.3.7;3.7 Effects Associated with B Chromosomes and B Transcribed Sequences;79 1.4.3.8;3.8 Potential Uses of B Chromosomes;80 1.4.3.9;References;81 1.4.4;Chapter 4: Cytogenetic Mapping in Plants;87 1.4.4.1;4.1 Cytological Maps of Chromosome Features;89 1.4.4.1.1;4.1.1 Mapping of Visible Cytological Features;89 1.4.4.1.2;4.1.2 Use of Staining to Visualize Additional Cytological Features;92 1.4.4.2;4.2 Mapping of Chromosomal Rearrangements;95 1.4.4.2.1;4.2.1 Use of Irradiation to Produce Additional Chromosomal Rearrangements;95 1.4.4.2.2;4.2.2 Use of Gametocidal Genes to Produce Deletions for Mapping in Wheat;96 1.4.4.2.3;4.2.3 B-A Translocations in Maize Physical Mapping;98 1.4.4.3;4.3 Mapping by Electron Microscopy;98 1.4.4.3.1;4.3.1 Three-Dimensional Reconstructions of Chromosomes from Whole Nuclei;98 1.4.4.3.2;4.3.2 Mapping of Recombination Nodules on SC Spreads;99 1.4.4.4;4.4 In Situ Hybridization (ISH);101 1.4.4.4.1;4.4.1 Radioactive In Situ Hybridization;101 1.4.4.4.2;4.4.2 Biotinylated Probes for In Situ Hybridization;101 1.4.4.4.3;4.4.3 Fluorescence In Situ Hybridization;102 1.4.4.5;4.5 Types of DNA Probes;103 1.4.4.5.1;4.5.1 Genetically Mapped Probes;103 1.4.4.5.2;4.5.2 Large DNA Fragment Probes;105 1.4.4.5.3;4.5.3 Repetitive Sequences Probes;110 1.4.4.6;4.6 Target Chromosomes

for Plant Cytogenetic Mapping;111 1.4.4.6.1;4.6.1 Mitotic Metaphase and Prometaphase;113
1.4.4.6.2;4.6.2 Meiotic Prophase;113 1.4.4.7;4.7 High-Resolution Mapping;115 1.4.4.7.1;4.7.1 Extended
or Superstretched Chromosomes;115 1.4.4.7.2;4.7.2 Interphase: Extended DNA Fibers;115 1.4.4.8;4.8
Utility of Cytogenetic Maps;116 1.4.4.9;References;116 1.4.5;Chapter 5: DNA and Chromatin
Fiber-Based Plant Cytogenetics;128 1.4.5.1;5.1 Fiber-FISH Mapping of Repetitive DNA Sequences;129
1.4.5.2;5.2 Fiber-FISH Mapping of Large and Complex Genomic Loci;130 1.4.5.3;5.3 Fiber-FISH Mapping
on Cloned and Organelle DNA Molecules;131 1.4.5.4;5.4 Optical Mapping of Extended DNA
Molecules;132 1.4.5.5;5.5 Immunoassays on Extended Chromatin Fibers;133 1.4.5.6;References;134
1.5;Part II: Function, Organization, and Dynamics in Plant Cytogenetics;138 1.5.1;Chapter 6: Plant
Centromeres;139 1.5.1.1;6.1 Introduction;140 1.5.1.2;6.2 Maize Centromeres;140 1.5.1.3;6.3
Arabidopsis;144 1.5.1.4;6.4 Rice;144 1.5.1.5;6.5 Concluding Remarks;145 1.5.1.6;References;145
1.5.2;Chapter 7: Plant Telomeres;149 1.5.2.1;7.1 Introduction;150 1.5.2.2;7.2 Plant Telomeric DNA;151
1.5.2.2.1;7.2.1 Telomere DNA Structure;151 1.5.2.2.1.1;7.2.1.1 The Telomere Contains an Array of
Telomere Repeats and a Single-Strand Overhang;151 1.5.2.2.1.2;7.2.1.2 The T-Loop;152
1.5.2.2.1.3;7.2.1.3 Telomeric Chromatin;153 1.5.2.2.2;7.2.2 Plant Telomere Repeat Variants;154
1.5.2.2.2.1;7.2.2.1 EAN/ISBN : 9780387708690 Publisher(s): Springer, Berlin, Springer, New York
Format: ePub/PDF Author(s): Bass, Hank W. - Birchler, James A.

[DOWNLOAD HERE](#)

Similar manuals:

[Plant Cytogenetics](#)