

1. Record Nr.	UNINA9910812101203321
Titolo	Plant centromere biology // editors, Jiming Jiang, James A. Birchler
Pubbl/distr/stampa	Ames, Iowa, : Wiley-Blackwell, 2013
ISBN	9781118525715 111852571X 9781299157811 1299157815 9781118525685 111852568X 9781118525555 1118525558
Edizione	[1st ed.]
Descrizione fisica	1 online resource (223 p.)
Altri autori (Persone)	JiangJiming BirchlerJames A <1950-> (James Arthur)
Disciplina	572.8/2
Soggetti	Plant molecular genetics Plant genomes Plant physiology Centromere Botany
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Cover; Title page; Copyright page; Contents; Contributors; Preface; 1: Arabidopsis Centromeres; Centromere DNA structure; Cytosine methylation and heterochromatin; Centromere proteins; Functional domains; Future prospects and conclusions; Acknowledgments; References; 2: Rice Centromeres; Discovery of the centromeric retrotransposon (CR) in cereal species; CRR elements in rice centromeres; Rice centromeres contain a centromere-specific satellite repeat CentO; Genome-wide mapping of CENH3-associated DNA sequences in rice centromeres; Genes in rice centromeres Epigenetic modification of centromeric DNA and centromeric chromatin in rice Future research; Acknowledgments; References; 3: Maize

Centromeres; Molecular characterization of maize centromeres: the beginnings; CENH3; The maize genome sequence; CRM evolution; CentC evolution; Other tandem repeats near maize centromeres; Enrichment of CentC and CRM in functional centromeres; Mapping centromere BACs; Delineation of the functional centromeres; Arrangement of centromere repeats; Centromere inactivation and reactivation; B centromeres; Sequence turnover at centromeres Epigenetics of maize centromeres Remaining questions; Acknowledgments; References; 4: A Molecular Cytogenetic Analysis of the Structure, Evolution, and Epigenetic Modifications of Major DNA Sequences in Centromeres of Beta Species; The genus Beta; Genomes and chromosomes; Diversity and evolution of satellite DNA as a major component of Beta centromeres; Centromeric retrotransposons in the genus Beta; The centromeres of Beta procumbens and alien fragment addition lines; Epigenetic characterization of the sugar beet centromere; References

5: Centromere Synteny among Brachypodium, Wheat, and Rice Centromeres of wheat; Centromeres of Brachypodium distachyon; Centromere synteny between wheat and rice; Centromere synteny among Brachypodium, wheat, and rice; Possible mechanism of centromere inactivation; Acknowledgments; References; 6: CENH3 for Establishing and Maintaining Centromeres; CENH3: detection and evolution; Identification and localization studies of CENH3 in different plant species; CENH3 duplication in allopolyploid and some diploid species; Loading of CENH3 to plant centromeres during mitotic cell cycle Distribution of CENH3 in pollen nuclei and its resetting in the zygote Epigenetic regulation of kinetochore assembly; Functional requirement of N- and C-terminal parts of CENH3; Recognition of A. thaliana centromeres by heterologous CENH3; Dereglulation of CENH3 activity in plants; Interaction of CENH3 with centromeric DNA; Regulation of CENH3 expression by the E2F transcription factor family; CENH3 levels at centromeres decline with the age of tissue; CENH3, from basic research to agricultural application; Acknowledgments; References; 7: Holokinetic Centromeres Occurrence and evolution of holocentric chromosomes

Sommario/riassunto

Plant Centromere Biology is dedicated to plant centromere research. Chapters cover the structure of centromeres from several plant species including Arabidopsis thaliana, rice, maize, wheat and beet, while other sections cover several unique characteristics associated with plant centromeres, including classical and modern neocentromeres, centromere drive and centromere misdivision. Additional chapters are dedicated to epigenetic modification and evolution of plant centromeres, and development and application of plant artificial chromosomes. Written by an international group
