Record Nr.	UNINA9910253929203321
Titolo	Plant Epigenetics / / edited by Nikolaus Rajewsky, Stefan Jurga, Jan Barciszewski
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2017
ISBN	3-319-55520-0
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (XI, 536 p. 53 illus., 48 illus. in color.)
Collana	RNA Technologies, , 2197-9731
Disciplina	581.15
Soggetti	Nucleic acids
	Plant genetics
	Agriculture Biomedical engineering
	Biotechnology
	Nucleic Acid Chemistry
	Plant Genetics and Genomics
	Biomedical Engineering/Biotechnology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Chapter 1: Conservation, Divergence and Abundance of MiRNAs and Their Effect in Plants Chapter 2: The Role of MiRNAs in Auxin Signaling and Regulation During Plant Development Chapter 3: Growing Diversity of Plant MicroRNAs and MIR-Derived Small RNAs Chapter 4: An Evolutionary View of the Biogenesis and Function of Rice Small RNAs Chapter 5: Small RNAs: Master regulators of epigenetic silencing in plants Chapter 6: Small RNA biogenesis and degradation in plants Chapter 7: Plant Epigenetics: Non-Coding RNAs as Emerging Regulators Chapter 8: Genome-Wide Function Analysis of LincRNAs as MiRNA Targets or Decoys in Plant Chapter 9: Plant Noncoding RNAs and the New Paradigms Chapter 10: Epigenetic Regulation by Non-Coding RNAs in Plant Development Chapter 11: RNAi Suppressors: Biology and Mechanisms Chapter 12: Analysis of Nucleic Acids Methylation in Plants Chapter 13: DNA Methylation in Plants by MicroRNAs Chapter 14: DNA Methylation in Plants and its

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	Implications in Development, Hybrid Vigor and Evolution Chapter 15: Dynamic DNA Methylation Patterns in Stress Response Chapter 16: Locus-specific DNA methylation analysis and applications to plants Chapter 17: Epigenetics in Plant Reproductive Development: An Overview from Flowers to Seeds Chapter 18: Epigenetic Regulation of Phase Transitions in Arabidopsis thaliana Chapter 19: Epigenetics in Plant-Pathogen Interactions Chapter 20: Epigenetic Reprogramming During Plant Reproduction Chapter 21: Rice Epigenomics: how does Epigenetic Manipulation of Crops Contribute to Agriculture? Chapter 22: Epigenetic Characterization of Satellite DNA in Sugar Beet (Beta vulgaris) Chapter 23: Universal and Lineage- specific Properties of Linker Histones and SWI/SNF-chromatin Remodeling Complexes in Plants Chapter 24: Abiotic Stress Induced Epigenetic Modifications in Plants: How Much do we Know? Chapter 25: Apple Latent Spherical Virus (ALSV) Vector as a Tool for Reverse Genetic Studies and Non-Transgenic Breeding of a Variety of Crops.
Sommario/riassunto	This book presents, in 26 chapters, the status quo in epigenomic profiling. It discusses how functional information can be indirectly inferred and describes the new approaches that promise functional answers, collectively referred to as epigenome editing. It highlights the latest important advances in our understanding of the functions of plant epigenomics and new technologies for the study of epigenomic marks and mechanisms in plants. Topics include the deposition or removal of chromatin modifications and histone variants, the role of epigenetics in development and response to environmental signals, natural variation and ecology, as well as applications for epigenetics in crop improvement. Discussing areas ranging from the complex regulation of stress and heterosis to the precise mechanisms of DNA and histone modifications, it presents breakthroughs in our understanding of complex phenotypic phenomena.