Record Nr.	UNINA9910465455103321
Titolo	Genome instability and transgenerational effects [[electronic resource] /] / Igor Kovalchuk and Olga Kovalchuk, editors
Pubbl/distr/stampa	New York, : Nova Science Publishers, c2010
ISBN	1-61761-663-X
Descrizione fisica	1 online resource (490 p.)
Collana	Geneticsresearch and issues series
Altri autori (Persone)	KovalchukIgor KovalchukOlga, MD.
Disciplina	572.8/77
Soggetti	Epigenesis Mutation (Biology) Variation (Biology) Electronic books.
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	""GENOME INSTABILITY AND TRANSGENERATIONAL EFFECTS""; ""GENOME INSTABILITY AND TRANSGENERATIONAL EFFECTS""; ""CONTENTS ""; ""PREFACE ""; ""GENETIC AND EPIGENETIC REGULATION OF TRANSGENERATIONAL CHANGES IN GENOME STABILITY: AN OVERVIEW""; ""REFERENCES ""; ""GENETIC AND EPIGENETIC MECHANISMS ENSURING STABILITY OF MAMMALIAN GENOMES""; "ABSTRACT ""; ""INTRODUCTION ""; "GENETIC MECHANISMS OF GENOME STABILITY ""; ""Direct Reversal of Damage ""; "Base Excision Repair ""; "Nucleotide Excision Repair ""; "Mismatch Repair ""; "Repair of DNA Strand Breaks by Homologous Recombination "" ""Non-Homologous End Joining """Cell Cycle Checkpoints ""; ""EPIGENETIC REGULATION OF GENOMIC STABILITY ""; "DNA Methylation ""; "Histone Modifications ""; "Short RNA-Mediated Silencing ""; "CONCLUSION ""; "REFERENCES ""; "GENETIC AND EPIGENETIC REGULATION OF GENOME STABILITY IN PLANTS""; ""ABSTRACT ""; "INTRODUCTION ""; "1. ENDOGENOUS AND EXOGENOUS FACTORS THAT AFFECT GENOME STABILITY"; "1.1. Reactive Oxygen Species Challenge DNA the Repair Machinery and Decrease Genome Stability ""; ""1.2. The Choice of DNA Repair Pathway

1.

May Regulate Plant Genome Stability ""

""1.3. The Importance of Plant Genome Plasticity for Stress Tolerance and Genome Evolution""""2. MECHANISMS AND FUNCTIONS OF EPIGENETIC REGULATIONS IN THE PLANT GENOME ""; ""2.1. DNA Methylation Is a Critical Component in the System of Epigenetic Modifications in Plants""; ""2.2. Histone Modifications and DNA Methylation Are Interdependent ""; ""2.3. Chromatin Remodeling Shapes Chromatin Structure and Complements DNA and Histone Modifications""; ""3. EPIGENETIC MODIFICATIONS a€? A STRESS-RESPONSIVE MECHANISM CONTROLLING GENE REGULATION AND GENOME STABILITY""

""3.1. Effects of Stress on Epigenetic Regulations """"3.2. Small RNAs May Direct Epigenetic Modifications to a Specific Genomic Locus""; "3.2.1. The Complexity and Functional Redundancy of smRNA Biogenesis Pathways in Arabidopsis ""; ""3.2.2. Mechanisms of smRNA-Directed Epigenetic Regulations ""; ""3.2.3. Small RNA Biogenesis is a Sensitive Stress-Responsive System ""; ""4. INDUCIBLE EPIGENETIC CHANGES MAY CHANGE GENOME STABILITY AND GUIDE GENOME EVOLUTION""; ""CONCLUDING REMARKS ""; ""ACKNOWLEDGMENTS ""; ""REFERENCES ""; ""EVOLUTION OF THE FPG/NEI FAMILY OF DNA GLYCOSYLASES ""

""ABSTRACT """"ABBREVIATIONS ""; ""INTRODUCTION ""; ""METHODS ""; ""EVENTS IN THE FPG/NEI PHYLOGENY ""; ""Horizontal Transfer ""; ""Changes in Substrate Specificity ""; ""Changes in the Structural Zinc-Finger Motif ""; ""Expansion within the Actinobacteria ""; ""THE ENZYMATIC FUNCTION OF THE FPG2 GLADE REMAINS UNKNOWN ""; ""CONCLUSION ""; ""REFERENCES ""; ""STRESS-INDUCED MUTAGENESIS IN BACTERIA ""; ""ABSTRACT ""; ""INTRODUCTION ""; ""STRESSFUL (MUTAGENIC) FACTORS ""; ""STRESS RESPONSE TO ENDOGENOUS AND EXOGENOUS DNA-DAMAGING AGENTS""; ""TRANSLESION DNA SYNTHESIS "" "THE GENERAL STRESS RESPONSE ""