

GENOME DYNAMICS & STABILITY

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Genome Integrity: Facets and Perspectives

Cells and viruses maintain a genome capable of multiplication, variation and heredity. A genome consists of chromosomes, each built up from a minimum of two complementary strands of nucleic acid known as DNA. Its chemical integrity, however, is under constant assault from metabolic mutagens, such as hydroxy-radicals, endonucleases, radiation, replication errors, and environmental mutagens.

From microorganisms to humans, this volume provides an interdisciplinary overview of how genome integrity is maintained. The volume begins with DNA replication and continues with replicative DNA repair and pleiotropic protein interactions.

Examples of human diseases are included and the cellular responses to radiation and genotoxic stress affecting whole genomes are reviewed.

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