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Excision Repair Lei Li; ABSTRACT; 1. INTRODUCTION; 2. BASIC MECHANISM OF NER  
 3. PROTEIN FACTORS INVOLVED IN NUCLEOTIDE EXCISION REPAIR (FIG. 2)3.1. Lesion Recognition; 3.2. Introduction of Dual Incisions; 3.3. Repair Synthesis; 4. GENETICS OF NER AND THE ESSENTIAL ROLE OF NER IN PREVENTING TUMORIGENESIS; 5. APPROACHES IN STUDYING NER; 6. PERSPECTIVES; ACKNOWLEDGMENTS; References; Chapter 4 DNA Mismatch Repair: Biological Functions and Molecular Mechanisms Guo-Min Li; ABSTRACT; 1. INTRODUCTION; 2. THE MISMATCH REPAIR SYSTEM CORRECTS BIOSYNTHETIC ERRORS; 2.1. DNA Mismatch Repair in Escherichia coli; 2.2. Mismatch Repair in Human Cells  
 3. DEFECTS IN MMR DEFICIENCY LEAD TO HUMAN CANCER 3.1. Microsatellite Instability in HNPCC and Sporadic Colorectal Cancer; 3.2. Loss of MMR Function Is the Genetic Basis of HNPCC; 3.2.1. The linking of MMR defects with MSI tumors; 3.2.2. Germline mutations of MMR genes in HNPCC; 3.3. Restoration of MMR to Tumor Cells with MSI by MMR Gene Products; 3.4. Microsatellite Instability and MMR De.cieny in Non-Colorectal Cancers; 3.5. Mice with MMR Gene Knockouts Predisposed to Cancers; 3.6. Epigenetic Silencing of MMR Gene Expression Leads to Sporadic Cancers  
 3.7. MMR Deficiency and Inactivation of Genes Critical for Cellular Growth Control and Genomic Stability 4. THE MMR SYSTEM MEDIATES DNA DAMAGE SIGNALING; 4.1. MMR Deficiency and Drug Resistance; 4.2. MMR Proteins Promote DNA Damage-Induced Cell Cycle Arrest and Apoptosis; 4.3. MMR-Mediated Apoptosis Eliminates Potentially Tumorigenic Cells; 5. ROLE OF MMR IN OTHER DNA METABOLIC PATHWAYS; 6. CONCLUSION AND PERSPECTIVES; ACKNOWLEDGMENTS; References; Chapter 5 Mammalian Homologous Recombination Repair and Cancer Intervention Zhiyuan Shen and Jac A. Nickoloff; ABSTRACT; 1. INTRODUCTION  
 2. DNA DOUBLE-STRAND BREAK REPAIR BY HR

## Sommario/riassunto

This volume describes the elaborate surveillance systems and various DNA repair mechanisms that ensure accurate passage of genetic information onto daughter cells. In particular, it narrates how the cell cycle checkpoint and DNA repair machineries detect and restore DNA damages that are embedded in millions to billions of normal base pairs. The scope of the book ranges from biochemical analyses and structural details of DNA repair proteins, to integrative genomics and population-based studies. It provides a snapshot of current understanding about some of the major DNA repair pathways, including