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Nota di contenuto	Genomic uracil : dangers and benefits in processing / Hans Krokan -- The GO repair pathway : OGG1 and MUTYH / Sheila David -- The DNA glycosylases that recognize and remove free radical-damaged pyrimidines / Susan Wallace -- Alkyladenine DNA glycosylase / Leona Samson -- The abasic endonuclease APE1 : much more than a DNA repair enzyme / Gianluca Tell -- Central steps in mammalian BER and regulation by PARP1 / Samuel Wilson -- Processing strand break termini in the DNA single strand break repair pathway / Michael Weinfeld -- The PARP-XRCC1 axis in base excision repair / Janet Hall -- DNA ligases in base excision repair / Alan Tomkinson -- Base excision repair and epigenetic regulation / Primo Schar -- Base excision repair in the immune system / Carol Schrader -- Base excision repair in the etiology of lupus and cancer / Joann Sweasy -- Base excision repair in trinucleotide repeat expansion disorders / Margherita Bignami -- Neurodegeneration caused by accumulation of an oxidized base lesion, 8-oxoguanine, in nuclear and mitochondrial DNA: from animal models to human diseases / Yusaku Nakabeppu -- Assessing BER capacity in the human population / Zachary Nagel -- Prognostic and predictive significance of base excision repair in human cancers / Srinivasan Madhusudan -- Enzymes in the base excision repair pathway as targets for small molecule mediated therapeutics / R. Stephen Lloyd

-- Mitochondrial base excision repair / Nadja de Souza Pinto -- Base excision repair in aging / Tinna Stevnsner.

Sommario/riassunto

"This book will serve as the preeminent text book on the topic of "base excision repair", a key DNA repair pathway that protects cells from most spontaneous forms of DNA damage, including oxidative lesions that arise both in the nuclear and mitochondrial genomes. The book, which includes contributions from many of the world leaders in the field, provides a detailed description of the molecular mechanisms of base excision repair, as well as its emerging relationship to epigenetic regulation, the aging process and human disease, such as cancer susceptibility, immunological defects and neurological disorders. The book will also cover the state-of-the-art technologies being developed to assess base excision repair capacity among individuals in the population, in addition to the strategies being employed to target base excision repair as part of therapeutic paradigms to eradicate disease, namely cancer. This book represents one of the most extensive efforts to date to cover the topic of "base excision repair". It includes chapters by many of the most established investigators in the field, from all over the world."--Publisher's website.
