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Nota di contenuto	Chapter 1 An overview of circular RNAs -- Chapter 2 RNA-sequencing and the predictions tools for circular RNAs -- Chapter 3 Online databases and circular RNAs -- Chapter 4 Circular RNA splicing -- Chapter 5 Circular RNAs biogenesis in eukaryotes through self-cleaving hammerhead ribozymes -- Chapter 6 Circular RNAs act as miRNA sponges -- Chapter 7 Regulation of transcription by Circular RNAs -- Chapter 8 Functional Analysis of Circular RNAs -- Chapter 9 Circular RNA in Exosomes -- Chapter 10 Circular RNAs in Blood -- Chapter 11 Circular RNA in Saliva -- Chapter 12 Emerging role of circular RNAs as potential biomarkers for the diagnosis of Human Diseases -- Chapter 13 Circular RNAs as novel biomarkers for cardiovascular diseases -- Chapter 14 Circular RNAs as biomarkers for cancer -- Chapter 15 Circular RNAs in cardiovascular diseases -- Chapter 16 Circular RNAs and Neuronal Development -- Chapter 17 Circular RNAs in Cancer -- Chapter 18 Circular RNAs in Brain Physiology and Disease -- Chapter 19 Circular RNA and Alzheimer’s Disease -- Chapter 20 Circular RNA in Liver: Health and Diseases -- Chapter 21 Circular RNAs in Organ Fibrosis -- Chapter 22 Circular RNAs in Metabolic Diseases -- Chapter 23 Circular RNAs in vascular functions and diseases -- Chapter 24

Functional role of circular RNA in regenerative medicine -- Chapter 25 The role of circular RNAs in cerebral ischemic diseases: ischemic stroke and cerebral ischemia/reperfusion injury -- Chapter 26 CircRNAs in plants -- Chapter 27 Circular RNAs and plant stress responses -- Chapter 28 Prospective advances in circular RNA investigation.

Sommario/riassunto

This book provides an essential overview of the rapidly advancing field of circular RNAs – newly discovered RNAs that are generated by back-splicing precursor mRNA and perform regulatory functions in many biological processes. Although many aspects of circular RNAs' biology and mechanisms of gene regulation remain unclear, they have been found to be abundant, evolutionally conserved, and stable in cells; further, they have numerous potential functions. The book consists of eight parts:1) An overview of circular RNAs, 2) Bioinformatics for circular RNAs, 3) Biogenesis of circular RNAs, 4) Molecular mechanisms and gene regulation of circular RNAs, 5) Circular RNAs as potential disease biomarkers, 6) Circular RNAs and human diseases, 7) Circular RNAs in Plants and in Archaea, and 8) Future prospects. Given its focus, the book will be especially useful for researchers and students in the fields of biochemistry, molecular biology, cell biology, and medicine.