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| Nota di bibliografia | Includes bibliographical references and index at the end of each chapters. |
| Nota di contenuto | Part I Bioinformatics and Other Methodologies for lncRNAs -- 1 Complexity of Mammalian Transcriptome Analyzed by RNA Deep Sequencing -- 2 Synthetic Strategies to Identify and Regulate Noncoding RNAs -- Part II Atomic and Molecular Structures of lncRNAs -- 3 Structure and Interaction with Protein of Noncoding RNA: A Case for an RNA Aptamer Against Prion Protein -- 4 Characterization of G-quadruplex DNA- and RNA-binding Protein -- Part III Molecular Functions of lncRNAs -- 5 Initiation of Transcription Generates Divergence of Long Noncoding RNAs -- 6 Beneath the Veil of Biological Complexity There Lies Long Noncoding RNA: Diverse Utilization of lncRNA in Yeast Genomes -- 7 Long Noncoding RNAs as Structural and Functional Components of Nuclear Bodies -- Part IV Biological Actions of lncRNAs -- 8 Long Noncoding RNA in Epigenetic Gene Regulation -- 9 Mechanisms of Long Noncoding Xist RNA-mediated Chromosome-wide Gene Silencing in X-chromosome Inactivation -- Part V Potential Outcomes for Clinical Medicine -- 10 Regulation of pRB and p53 Pathways by Long Noncoding RNAs, ANRIL, lincRNA-p21, lincRNA-RoR |

and PANDA -- 11 The Role of Androgen-regulated Long Noncoding RNAs in Prostate Cancer -- 12 Macrophage Activation as a Model System for Understanding Enhancer Transcription and eRNA Function -- 13 Long Noncoding RNA Functions as a Regulator for Steroid Hormone Receptors Related Breast and Prostate Cancers -- BM Index.

Sommario/riassunto

This book presents a common principle of actions of long noncoding RNAs (lncRNAs) from points of view at the atomic, molecular, and cellular levels. At the atomic level, chemical studies of ribonucleic acids explain the chemical behavior of lncRNAs. Structural biological analysis of lncRNAs and its binding proteins also reveal the precise mechanisms of their actions. Molecular biological approaches lead to insights into molecular mechanisms of these lncRNA actions. At the cellular or individual level of analysis, we grasp the biology and medicine of lncRNAs. These three layers of approaches are thoroughly new and produce novel insights into functions of lncRNAs in living cells. The book consists of five parts: 1) Bioinformatics and other methodologies for lncRNAs, 2) Atomic and molecular structures of lncRNAs, 3) Molecular functions of lncRNAs, 4) Biological actions of lncRNAs, and 5) Potential outcomes for clinical medicine. These sections connect well and work synergistically. The book is for researchers whose specialty is RNA biology and chemistry and also for advanced students at the graduate and undergraduate levels. Readers can grasp the leading edge of lncRNA studies in a comprehensive manner and are inspired to pursue their own particular interests.
