

1. Record Nr.	UNINA9910253908003321
Titolo	RNA Activation // edited by Long-Cheng Li
Pubbl/distr/stampa	Singapore : , : Springer Singapore : , : Imprint : Springer, , 2017
ISBN	981-10-4310-8
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (XIV, 239 p. 45 illus., 38 illus. in color.)
Collana	Advances in Experimental Medicine and Biology, , 0065-2598 ; ; 983
Disciplina	572.88
Soggetti	Gene expression Biochemistry Cytology Molecular biology Cancer - Research Gene Expression Biochemistry, general Cell Biology Molecular Medicine Cancer Research
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	PART I Exogenous RNAa -- PART II Endogenous RNAa -- PART III RNA activation guided by other small RNAs -- PART IV Developing RNAa-based therapeutics -- .
Sommario/riassunto	This book offers an essential guide to RNA activation (RNAa), an emerging and fascinating new field. RNAa is a small RNA-guided and Argonaute-dependent gene regulation phenomenon in which promoter-targeted short double-stranded RNAs (dsRNAs) induce target gene expression at the transcriptional level. It occurs primarily in the nucleus and can be mediated by artificially designed short duplex RNAs that target regulatory sequences (e.g., promoters, genes' 3' termini and enhancers) and naturally occurring small RNAs (e.g., miRNAs and C. elegans 22G-RNAs). With contributions from internationally respected RNA experts, this book provides comprehensive coverage of different

RNAa mechanisms and a timely update on recent advances in RNAa research, with a focus on developing RNAa-based therapeutics. Special chapters are also devoted to the topics of gene activation induced by antisense oligonucleotides and the CRISPR system. As the first book to cover RNAa, it will be of interest to a wide audience, from scientists in academia and the pharmaceutical industry to clinicians who wish to further explore the biology of RNAa and related phenomena, so as to harness their full potential for use in biotechnology and drug development. .

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