1. Record Nr. UNINA9910437857203321

Titolo	RNA interference from biology to therapeutics / / Kenneth A. Howard, editor
Pubbl/distr/stampa	New York, : Springer, 2013
ISBN	1-4614-4744-5
Edizione	[1st ed. 2013.]
Descrizione fisica	1 online resource (347 p.)
Collana	Advances in delivery science and technology, , 2192-6204
Classificazione	WC 4460
Altri autori (Persone)	HowardKenneth A
Disciplina	572.88
Soggetti	RNA editing Gene silencing
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	RNA Interference Pathways and Therapeutic Exploitation RNA Interference -- Synthetic Dicer-Substrate siRNAs as Triggers of RNA Interference -- The Role of MicroRNAs in Natural Tissue Development and Application in Regenerative Medicine -- Intracellular Delivery Considerations for RNAi Therapeutics -- Mucosal Delivery of RNAi Therapeutics -- Nanomedicines for Systemic Delivery of RNAi Therapeutics -- Lipidoids: A Combinatorial Approach to siRNA Delivery -- Polymeric Micelles for siRNA Delivery -- RNAi Therapeutic Delivery by Exosomes -- Aptamer-Mediated siRNA Targeting -- RNAi as Anti-Viral Therapy: The HIV-1 Case -- Genome-Wide RNAi Screen for Identification of Human Host Factors Crucial for Influenza Virus Replication -- The Application of microRNAs in Cancer Diagnostics -- Therapeutic Application of miRNAs in Cancer -- Clinical Development of an Inhalable Anti-RSV siRNA Treatment.
Sommario/riassunto	The Nobel Prize winning discovery that small interfering RNA can be utilised to control cellular gene expression has propelled the field of RNA interference (RNAi) to the forefront of biomedical science as a potential molecular medicine set to revolutionalise disease treatment. Harnessing the molecular mechanisms of RNAi and development of delivery technologies is crucial for its transformation into a therapeutic modality, this dependency is the focus of “RNA Interference from Biology to Therapeutics” that gives a comprehensive overview of RNAi biology and state-of-the-art delivery methods

relevant to clinical translation of RNAi therapeutics. Key players and shapers in the fields of RNAi and delivery science have been assembled in a single volume to produce a truly unique interdisciplinary text, making it a “must-read” for both students and experts in, and at the interface of, RNAi, pharmaceutical science and medicine. An attractive feature is the “future perspectives” section within each chapter that allows global leaders the opportunity to express their views on the direction the field is moving. Topics covered in the book include miRNA biology and therapeutic exploitation, exosome delivery and clinical translation. “RNA Interference from Biology to Therapeutics” is an up-to-the-minute, highly informative and invaluable text for those actively involved or interested in this fascinating and high-impact field.