Record Nr. UNINA9910815366903321 Advanced delivery and therapeutic applications of RNAi / / edited by **Titolo** Kun Cheng, Ram I. Mahato Pubbl/distr/stampa Chichester, West Sussex, : John Wiley & Sons Inc., 2013 **ISBN** 1-118-61073-3 1-118-61074-1 1-299-46528-5 1-118-61075-X Edizione [2nd ed.] Descrizione fisica 1 online resource (535 p.) Classificazione SCI013040 Altri autori (Persone) ChengKun MahatoRam I Disciplina 572.8/8 Soggetti RNA - Therapeutic use Small interfering RNA - Therapeutic use Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Advanced Delivery and Therapeutic Applications of RNAi; Contents; Preface: Contributors: About the Editors: Part 1: Introduction and Basics of RNAi; 1 Mechanisms and Barriers to RNAi Delivery; 1.1 Introduction; 1.2 Barriers to Systemic RNAi Delivery; 1.3 Rational Design to Improve RNAi Efficacy; 1.4 Chemical Modifications to Enhance siRNA Stability and Reduce Immune Response; 1.5 Cellular Uptake and Intracellular Release of siRNA; 1.6 Combinatorial Targeting for Targeted RNAi Delivery; 1.7 Cell-Specific Aptamer-Functionalized Nanocarriers for RNAi Delivery 1.8 The Clinical Development and Challenges of siRNAs Therapeutics1. 9 Conclusion and Perspectives; References; 2 Analysis of siRNA Delivery Using Various Methodologies; 2.1 Introduction; 2.2 Checkpoints for Analyzing siRNA Delivery; 2.2.1 Circulation Checkpoint; 2.2.2 Organ or Tissue Checkpoint; 2.2.3 Cellular Checkpoint; 2.2.4 RISC Checkpoint; 2.2.5 Target mRNA Knockdown (Indirect Checkpoint); 2.2.6 Protein and Outcome (Indirect Checkpoint); 2.2.7 Safety (Indirect Checkpoint); 2.3

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"Commonly used by researchers to develop technologies for modifying and studying genetic process, RNA interference (RNAi) has many potential uses in medicine, biotechnology, and functional genomics. This book covers all essential aspects involved in the development of RNAi therapeutics, providing detailed guidance on the challenges and opportunities of bringing RNAi technologies from bench to clinic. It explores the design and mechanism of RNAi molecules, delivery strategies, and therapeutic applications in various diseases. Preclinical, regulatory, market, and intellectual aspects of RNAi technologies are also covered"--

"All of the essential aspects of developing RNAi therapeutics from bench to clinic presented in a single volume"--