1. Record Nr. UNINA9910298311703321

Titolo	MicroRNA Targeted Cancer Therapy / / edited by Fazlul H. Sarkar
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2014
ISBN	3-319-05134-2
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (349 p.)
Disciplina	50 570 610 614.5999
Soggetti	Cancer - Research Life sciences Medicine Cancer Research Science, Humanities and Social Sciences, multidisciplinary Life Sciences, general Medicine/Public Health, general
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	Preface -- The therapeutic role of microRNAs in human gliomas -- miRNA expression and functions in glioma and glioma stem cells -- The role of miRNAs in lung cancer drug resistance and targeted therapy -- The Potential Role of MicroRNA-Based Therapy for Lung Cancer Stem Cells -- State of our knowledge on miRNA targeted therapy in Lung Cancer -- miRNA-based Ovarian Cancer Diagnosis and Therapy -- Application of microRNA in the treatment and diagnosis of cervical cancer -- Overcoming Drug Resistance in Colorectal Cancer by microRNAs -- MicroRNAs as novel targets in liver cancer- facing the clinical challenge -- MicroRNA based therapeutic strategies for cancer: Emphasis on advances in renal cell carcinoma -- Modulating microRNA expression for the therapy of pancreatic cancer -- MicroRNA targeted therapy for overcoming drug resistance, reversal of EMT and

elimination of cancer stem cells in prostate and pancreatic cancer. - Modulation of deregulated miRNAs for targeted therapy in thyroid cancer -- miRNA-targeted therapies in the most prevalent pediatric solid tumors -- Targeting Immune System Through Targeting miRNA For Cancer Therapy.- miRNA regulation of DNA damage repair proteins in cancer cells: interplay of ATM, TRAIL and miRNA -- miRNA regulation of VEGF/VEGFR signaling -- Systems Biology Approaches in the Design of Effective miRNA-Targeted Therapeutics. Index.

Sommario/riassunto

Since the discovery of microRNAs (miRNAs) some twenty years ago by Victor Ambros, David Baulcombe and Gary Ruvkun, these three scientists worked to uncover the mystery of miRNA, the small segments of nucleotides that silence genes. While studying the development of the nematode worm, Ambros and Ruvkun discovered miRNA in animals, while Baulcombe discovered it in plants. Since their discovery, it took more than two decade to fully appreciate the value of miRNA in human health and diseases. Emerging evidence suggest that the activation of oncogenes and/or the inactivation of tumor suppressor genes contribute to the development and progression of tumors. The regulation of genes is by far controlled by many transcription factors which are often deregulated during the development and progression of cancer. In addition, emerging evidence clearly suggests that the deregulation of miRNAs or small non-coding RNAs could also regulate the expression of genes, and likewise, miRNA genes are also regulated by transcription factors. The most attractive feature of miRNAs is that one miRNA can regulate many target genes (mRNAs), and thus miRNA targeted therapy is highly promising because multiple genes could be regulated by targeting a single miRNA, which becomes very important for the killing of highly heterogeneous populations of cancer cells within a tumor mass. Therefore, miRNA targeted therapy is an attractive attribute of miRNA research, which is covered through eighteen chapters complied in this book “MicroRNA targeted Cancer therapy”, and it is hoped that the field of miRNA research will be appreciated through critical reading of these chapters on the cutting-edge research on miRNAs.