Record Nr. UNINA9910437607903321 DNA repair of cancer stem cells / / Lesley A. Mathews, Stephanie M. **Titolo** Cabarcas, Elaine M. Hurt, editors Pubbl/distr/stampa Dordrecht, : Springer, 2012, c2013 **ISBN** 1-283-52913-0 9786613841582 94-007-4590-7 Edizione [1st ed. 2013.] Descrizione fisica 1 online resource (179 p.) Altri autori (Persone) MathewsLesley A CabarcasStephanie M HurtElaine M Disciplina 616.99 616.99/4071 Soggetti Cancer cells DNA repair Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Includes bibliographical references and index. Nota di bibliografia Nota di contenuto Preface. -1 Introduction to Cancer stem cells.-2 DNA Repair Pathways and Mechanisms.-3 Resistance and DNA repair mechanisms of cancer stem cells: Potential molecular targets for therapy.-4 DNA Repair in Normal Stem Cells.-5 DNA Repair Mechanisms in Glioblastoma Cancer Stem Cells.-6 DNA Repair Mechanisms in Breast Cancer Stem Cells.7 DNA Repair Mechanisms in other Cancer Stem Cell models -- 8 Pancreatic cancer stem cells in tumor progression, metastasis, epithelial-mesenchymal transition and DNA repair.-9 Targeting Cancer Stem Cell Efficient DNA Repair Pathways: Screening for new therapeutics -- 10 The Future of DNA Repair and Cancer Stem Cells. Index. The existence of 'cancer stem cells' (CSCs) has been a topic of heated Sommario/riassunto debate for the last few years within the field of cancer biology. Their continuous characterization in a variety of solid tumors has lead to an

abundance of evidence supporting their existence. CSCs are believed to be responsible for resistance against conventional treatment regimes of chemotherapy and radiation, ultimately, leading to metastasis and

patient demise. To help aid clinicians, pharmaceutical companies and academic labs investigating how to better kill these highly aggressive cells we have summarized the DNA repair mechanism(s) and their role in the maintenance and regulation of both normal and cancer stem cells. Our book represents a comprehensive investigation into the highly effective DNA repair mechanisms of CSCs and what we need to understand in order to develop more advanced therapies to eradicate them from patients. Currently, there are no other published works entirely on DNA repair and Cancer Stem Cells. In addition, our book provides a comprehensive overview of CSC isolation and characterization from a variety of solid tumor types.