1. Record Nr. UNINA9910770260003321 Autore Bansal Mohinder Pal Titolo Redox Regulation and Therapeutic Approaches in Cancer / / by Mohinder Pal Bansal Singapore:,: Springer Nature Singapore:,: Imprint: Springer,, 2023 Pubbl/distr/stampa **ISBN** 9789819973422 9789819973415 Edizione [1st ed. 2023.] Descrizione fisica 1 online resource (435 pages) Disciplina 616.994 Soggetti Cancer Metabolism Cancer - Treatment **Biochemistry** Oxidation-reduction reaction Cancer Metabolism **Cancer Therapy** Redox Biology Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references. Nota di contenuto 1. ROS, redox regulation and signaling in cancer cells -- 2. ROS and redox regulation/signaling and metabolism in cancer stem cells -- 3. . ROS/Redox regulation with dietary phytochemicals and role in anticancer activity -- 4. ROS/Redox signaling and apoptosis/necroptosis/autophagy in cancer -- 5. Cancer Metastasis, ROS/redox signaling and PCD resistance/redox metabolism -- 6. Immune system, redox signaling and cancer immunity -- 7. P53, ROSredox regulation signaling, metabolic reprogramming and autophagy in cancer -- 8. Cell cycle, DNA damage-repair systems and impact of redox regulation in cancer -- 9. ROS, redox regulation and anticancer therapy -- 10. Perspectives in ROS/redox regulation cancer therapy.

This book aims to provide an association of the major redox-sensitive pathways and networks involved in cancer. The initial chapter of the book discusses basic information about oxidative stress, its generation,

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and regulation (redox regulation or redox homeostasis) via cell signaling in normal and cancer cells. The book also explores antioxidants and metabolic events in cancer cells compared to normal cells. It further covers the application of nanoparticles in redox regulation in cancer cells. The role of redox regulation in cancer therapy, its influence, and its involvement in programmed cell death (PCD), metastasis, immune system, p53, and cell cycle/DNA damage repair pathways have been discussed in separate chapters. It further reviews the importance of dietary phytochemicals in redox regulation in normal and cancer pathophysiology. Towards the end, the book focuses on the role of redox balance, especially in ROS-dependent cellular processes in cancer stem cells.