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Titolo	Handbook of oxidative stress in cancer : mechanistic aspects // edited by Sajal Chakraborti, Bimal K. Ray, Susanta Roychoudhury
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ISBN	981-15-9411-2
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (2659 pages) : illustrations (chiefly color)
Collana	Springer Nature reference
Disciplina	612.22
Soggetti	Active oxygen - Physiological effect Cancer Oxidative stress Estrès oxidatiu Càncer Oxigen actiu Efectes fisiològics Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Involvement of ROS in thyroid cancer -- Skin cancer induced by pollution-mediated ROS -- Roles of -Glucans in Oxidative Stress and Cancer -- Oxidative stress in glioma and its microenvironment -- Reactive oxygen species and their contribution to carcinogenesis -- Oral cancer and oxidative stress -- Oxidative stress in genitourinary cancer -- Oxidative stress in oral cancer -- Oxidative stress and glyoxalase pathway in cancer -- ROS and EMT in multistep carcinogenesis -- Functional regulation between matrix metalloproteases and cell junction proteins in gastric cancer -- Association of oxidative stress and mitochondrial dysfunction to gynaecological malignancies -- Impact of Caenorhabdits elegans in cancer drug resistance and development -- Pharmacology of natural products specifically plant based mitigating cisplatin-induced cardiotoxicity and attenuating oxidative stress, inflammation and associated signalling pathways -- Scaffold based selective ROS generation as viable therapeutic strategies.

This comprehensive, up-to-date reference work compiles the scientific research on the relationship between various forms of cancer and reactive oxygen species (ROS). It is well known that ROS play a key role in the various steps leading to malignancy, this includes increase in DNA mutation rates. The book brings together exciting reviews, written by leading experts all over the world. The book is divided into four broad sections. Each section describes the role of oxidative stress and underlying mechanisms and pathways, at various stages of cancer, including its role in carcinogenesis, cancer progression and metastasis. Further, the book describes how the reactive oxygen species (ROS) modulate gene expression and signal transduction pathways in cancer. The book discusses the ways to interfere with the cancer progression, and design of anti-cancer drugs. The book provides an integrated approach for better understanding of the development phases of oxidative stress-induced cancers, and mainly the current perspectives about mechanistic aspects of cancer initiation, progression and metastasis. It is a highly resourceful book and would be extremely important to clinicians, students and researchers in the field of cancer genetics, therapeutics and oncology.

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