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Titolo	Studies on Experimental Toxicology and Pharmacology // edited by Stephen M. Roberts, James P. Kehrer, Lars-Oliver Klotz
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ISBN	3-319-19096-2
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (496 p.)
Collana	Oxidative Stress in Applied Basic Research and Clinical Practice, , 2197-7224
Disciplina	615.9
Soggetti	Oxidative stress Pharmacology Apoptosis Environmental health Toxicological Phenomena Oxidative Stress Pharmacological Phenomena Pharmacology/Toxicology Environmental Health
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 at the end of each chapters and index.
Nota di contenuto	Part I. Toxicological Mechanisms and Evaluation of Oxidative Stress -- A historical perspective on oxidative stress and intracellular redox control -- An overview of free radicals as causes and consequences of toxicity -- Oxidants, radicals, free radicals, and other bad stuff in mechanisms of toxicity -- Lipid oxidation -- Protein oxidation and toxicology -- Oxidative stress and DNA damage association with carcinogenesis: A truth or a myth? -- Glutathione and thiols -- Reactive oxygen species as initiators and mediators of cellular signaling processes -- Role of oxidative stress in the process of carcinogenesis -- Part II. Agents that produce toxicity – mechanisms and therapeutic interventions -- Isolation of murine adult bone marrow and fetal liver cells for mechanistic assessment of hematotoxicity caused by organic

solvents -- Oxidative stress and ethanol toxicity -- Pharmaceutical agents -- Insecticides and herbicides -- Health effects of indoor air pollution due to cooking with biomass fuel -- Outdoor pollutants -- Oxidative Stress and the Inorganic Carcinogens -- UV-induced signaling: Role of reactive oxygen species -- Nanomaterials -- Chemical warfare agents -- Part III. Special topics -- On the biochemistry of antioxidants — current aspects.-Prevention of age-related diseases — Effects of antioxidant supplements -- The neural progenitor cell (NPC) niche in the adult brain provides a target for neurotoxicity — a potential Adverse Outcome Pathway for ROS-induced NPC dysfunction with higher sensitivity during aging. -- Oxygen toxicity: From cough to convulsion -- Oxidative stress in reproductive toxicology -- Toxicogenomics-based assessment of xenobiotic-induced oxidative stress -- Aquatic and marine biology.

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### Sommario/riassunto

This book focuses on data describing the roles of free radicals and related reactive species, and antioxidants, in the causes and treatments of diseases, examining both clinical and pre-clinical trials, as well as basic research. The book is divided into sub-sections with chapters on toxicological mechanisms, agents that produce toxicity, and special topics including areas such as antioxidant supplements, oxygen toxicity, toxicogenomics, and marine biology. Studies on Experimental Toxicology and Pharmacology promotes the concept of using biomarkers of free radical- and reactive species-induced injury as adjuncts to classical laboratory testing and the ability of antioxidants to provide cellular protection. There is increasing evidence that free radicals and other reactive species are causative, or at least supporting factors, that impact organisms and cause numerous tissue disorders. With contributions from international experts in the field, this volume is a valuable resource for researchers and postgraduate students in toxicology and related fields, as well as clinicians and clinical researchers.

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