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Nota di contenuto	Targeting NF-B to Prevent Radiation-Induced Carcinogenesis -- Antioxidants as a Bio-Shield against Radiological Weapons; Kedar -- Sensing Mechanisms of the Low-Power Infrared Radiation: From Molecular Target to Clinical Application -- Correction of the Cancer Therapy-Induced Anemia by the Grape Polyphenol Concentrate Enoant -- Radioprotective Properties of Seleno-Methionine with Methionine, Extracts from Basidium Fungi and Exogenous DNA -- Preventing the Harmful Health Effects of Biological Agents. Homocysteine: Neurotoxicity and Hyperexcitability -- Oxidation of Selected Lipids in Low Density Lipoprotein: Effects on Calcium Transients in Isolated Rabbit Cardiomyocytes -- Cerium Oxide Nanoparticles Counteract the Oxidative Stress in Cardiac Progenitor Cells -- Clinical Trial Complexity Measure – Balancing Constraints to Achieve Quality -- Bioactive Compounds from Natural Sources for Prophylaxis and Treatment of the

Effects of Radiological, Chemical and Biological Agents. Systemic Approach in Determining the Role of Bioactive Compounds -- Ecological Potential of Plants -- The Protective Effects of Natural Polyphenolic Complexes of Grape Wine on Organisms Exposed to Oxidative and Nitrosative Stress under Diabetes Mellitus -- Protection of Subjects Participating in Clinical Trials -- Adaptive and Mal-Adaptive Signaling in Cells of the Cardiovascular System: Effect of Obesity-Associated Peptides on Human Blood Platelet Activation -- Spontaneous and Induced Mutagenesis: The Necessity and Possibilities of Prevention with the Grape Polyphenolic Concentrate Enoant -- Searching for New Antimicrobial Targets: Na+ Cycle in Energetics of Bacterial Pathogens -- Natural Antimutagens for Environmental Quality Management and Transition to Ecological Civilization -- Biotechnological and Therapeutical Aspects of Defense against Radiological, Chemical and Biological Agents. Grape Polyphenols Attenuate Psychological Stress -- Grape Cane as a Source ofTrans-Resveratrol and Trans-Viniferin in the Technology of Biologically Active Compounds and Its Possible Applications -- The Effectiveness of Enoant in the Treatment of Bronchitis in Children -- Toxicology of Adipose Tissue (Adipotoxicology), or Adipose Tissue as a “Toxicrine” Organ -- Opportunity of Remediation of Radionuclide-Contaminated Soils and Growing Ecologically Pure Plant Material via Water-Retaining Polymer -- Bioactive Compounds of Crimean Wines Countering the Stress Experienced by Personnel -- Wine Components Normalize the Cytochrome P450 Content in the Liver and Kidneys of Rats under Neurogenic Stress.

Sommario/riassunto

The probability for exposure to damaging radiation, toxic chemicals in the environment and adverse biological agents has increased exponentially today. The more frequent and faster travel that we experience today also escalates the risk of contraction and transmission of potentially deadly infections. This has created a very real and escalating risk for injuries and deaths. This is accentuated in the military and medical staff that is more frequently exposed to radiological, chemical, and biological agents in their normal working environment. Understanding the mechanisms whereby these toxic agents inflict damage to our bodies is essential to prepare us for these challenges. Much of the damage is inflicted through the generation of free radicals and non-radical oxidants which then act through oxidative mechanisms to injury the body. This volume will discuss the damage caused by these radiological, chemical, and biological environmental stressors, the mechanisms through which the damage can occur and the novel strategies that can be used to reduce the injury inflicted by these toxic compounds. Using basic and clinical research approaches, the contents of this
book discuss new ideas for the development of bioactive product s and environmental approaches to lessen or negate the biological damage inflicted by thesenoxious compounds.