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Nota di contenuto	Overview -- Foreign Compounds: Foods, Drugs and Other Chemicals -- Absorption, Metabolism and Excretion of Foreign Compounds -- Metabolism of Foreign Compounds -- Bioactivation Metabolism: Activation Enzymes -- Functionalization Reactions Catalyzed by Activation Enzymes -- Detoxifying Metabolism: Detoxification Enzymes -- Conjugation Reactions Catalyzed by Detoxification Enzymes -- Reactive Intermediates Generated from Bioactivation -- Electrophilic Nature of Metabolic Reactive Intermediates -- Oxidative Stress Mediated by Reactive Intermediates -- Xenobiotics Bioactivation - Mediated Cellular Damages -- Nrf2 - ARE Pathway: Defense Against Oxidative Stress -- Genetic Variations and Polymorphisms of Metabolic Enzymes -- Enzyme Polymorphisms Affecting Xenobiotic Toxicity -- Inducibility of foreign Compound Metabolic Enzymes -- Induction of Enzymes for Health Benefits -- Diversity of Metabolic Enzyme Modulators -- Dietary Inducers of Detoxification Enzymes.

Sommario/riassunto

This book provides a comprehensive, organized, and concise overview of Xenobiotic Metabolic Enzymes and their health implications. The subjects addressed are broad in scope with an emphasis on recent advances in research on biochemical and biomedical aspects of these enzymes. The xenobiotics discussed include not just drugs, but also food, smoke, and other environmental chemicals. The subjects covered in this work include: metabolic enzymes and their catalyzed reactions, reactive intermediates generated from metabolic activation, oxidative stress mediated by electrophilic reactive intermediates, bioactivation - mediated cellular and functional damages, activation of Nrf2 – ARE pathway, genetic variations affecting metabolic enzyme expression, enzyme polymorphisms affecting xenobiotic - mediated toxicity, induction of metabolic enzymes for health benefits, and a diversity of metabolic enzyme modulators.