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Nota di contenuto	Cover; Title Page; Contents; Foreword; Preface; Acronyms; Glossary; Chapter 1 Environmental Endocrine Disruptors; 1.1 Introduction; 1.1.1 The Endocrine System; 1.1.2 Endocrine Disrupting Chemicals (EDCs); 1.1.3 Sources of EDCs in the Environment; 1.1.4 Deleterious Effects of EDCs on Wildlife and on Humans; 1.1.5 Endocrine Disruption Endpoints; 1.2 Salient Aspects about Endocrine Disruption; 1.2.1 Low-Dose Effects and Nonmonotonic Dose Responses; 1.2.2 Exposures during Periods of Heightened Susceptibility in Critical Life Stages; 1.2.3 Delayed Dysfunction; 1.2.4 Importance of Mixtures 1.2.5 Transgenerational, Epigenetic Effects 1.3 Historical Perspective of Endocrine Disruption; 1.4 Scope and Layout of this Book; 1.5 Conclusion; References; Part I Mechanisms of Hormonal Action and Putative Endocrine Disruptors; Chapter 2 Mechanisms of Endocrine System Function; 2.1 Introduction; 2.2 Hormonal Axes; 2.2.1 Hypothalamus-Pituitary-Gonad (HPG) Axis; 2.2.2 The Hypothalamic-Pituitary-Thyroid (HPT) Axis; 2.2.3 The Hypothalamic-Pituitary-Adrenal (HPA) Axis; 2.3 Hormonal Cell Signaling; 2.3.1 Receptors and Hormone

Action; 2.3.2 Genomic Signaling Pathway
2.3.3 Rapid-Response Pathway (Nongenomic Signaling)2.3.4 Receptor Agonists, Partial Agonists, and Antagonists; 2.4 Sex Steroids; 2.4.1 Physiologic Estrogens; 2.4.2 Androgens; 2.5 Thyroid Hormones; 2.6 Conclusions and Future Prospects; References; Chapter 3 Environmental Chemicals Targeting Estrogen Signaling Pathways; 3.1 Introduction; 3.1.1 Gonadal Estrogen Function Disruptors; 3.2 Steroidal Estrogens; 3.2.1 Physiologic Estrogens; 3.2.2 17alpha-Ethinylestradiol (EE2); 3.2.3 Phytoestrogens; 3.2.4 Mycoestrogen-Zearalenone (ZEN); 3.3 Nonsteroidal Estrogenic Chemicals
3.3.1 Diethylstilbestrol (DES)3.3.2 Organochlorine Insecticides; 3.3.3 Polychlorinated Biphenyls (PCBs); 3.3.4 Alkylphenols; 3.3.5 Parabens (Hydroxy Benzoates); 3.3.6 Sun Screens (Chemical UV Filters); 3.4 Metalloestrogens; 3.4.1 Cadmium (Cd); 3.4.2 Lead (Pb); 3.4.3 Mercury (Hg); 3.4.4 Arsenic (As); 3.5 Conclusion and Future Prospects; References; Chapter 4 Anti-Androgenic Chemicals; 4.1 Introduction; 4.2 Testosterone Synthesis Inhibitors; 4.2.1 Phthalates; 4.3 Androgen Receptor (AR) Antagonists; 4.3.1 Organochlorine (OC) Pesticides; 4.3.2 Organophosphorus (OP) Insecticides
4.3.3 Bisphenol A (BPA)4.3.4 Polybrominated Diphenyl Ethers (PBDEs); 4.3.5 Vinclozolin (VZ); 4.3.6 Procymidone; 4.4 AR Antagonists and Fetal Testosterone Synthesis Inhibitors; 4.4.1 Prochloraz; 4.4.2 Linuron; 4.5 Comparative Anti-Androgenic Effects of Pesticides to Androgen Agonist DHT; 4.6 Conclusions and Future Prospects; References; Chapter 5 Thyroid-Disrupting Chemicals; 5.1 Introduction; 5.2 Thyroid Synthesis Inhibition by Interference in Iodide Uptake; 5.2.1 Perchlorate; 5.3 TH Transport Disruptors and Estrogen Sulfotransferases Inhibitors; 5.3.1 Polychlorinated Biphenyls (PCBs)
5.3.2 Triclosan

Sommario/riassunto

The book is divided in three parts and 14 chapters. An introductory chapter provides an overview of endocrine system, and endocrine disruptors, discussing their salient features and presenting a historical perspective of endocrine disruption phenomena. The first part includes seven chapters that cover hormone-signalling mechanisms, followed by various broad classes of putative endocrine disruptors and an introduction to environmental epigenetic modifications. The second part in two chapters focuses on removal processes of various EDCs by biotic and abiotic transformation/ degradation. The
