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Nota di contenuto	1.Professor Giovanni Sindona -- 2.Evaluation of Quality and Safety of Foods by Tandem Mass Spectrometry -- 3.Detection of Biological Warfare Agents Using Biosensors -- 4.Mass Spectrometry Methods for Food Safety/Detection of Toxins in Food -- 5.Fundamentals of Mass Spectrometry-Based Metabolomics -- 6.Direct Mass Spectrometry as a Practical Analytical Strategy for High Speed, High Throughput Testing -- 7.Mass Spectrometry in Ecotoxicology -- 8.Matrix-assisted laser desorption/ionization imaging mass spectrometry: technology and applications -- 9. Risks and Consequences of Hazard Agents to Human Health -- 10. Bacterial threats to human health and food supply -- 11. An overview of male reproductive toxicants: facts and opinions -- 12. Defense Against Biological Terrorism: Vaccines and their Characterization -- 13.Environmental Impact of Air Pollution on Human Health in the Annaba region (Algeria) -- 14.New insight into Idiopathic Nephrotic Syndrome: Strategy based on Urinary Exosomes -- 15. Synthesis of long-chain esters under continuous flow conditions -- 16.

Data Independent Acquisition Mass Spectrometry for Proteomic Advances into Isolated Methylmalonic Acidemia -- Deposition strategies of nano-TiO<sub>2</sub> photocatalyst for wastewater applications -- 18. Tri-modal MALDI-MS imaging on the same tissue section: Deeper molecular insights of disease -- Fabrication of QDs dimers with sub-nanometer interparticle distance -- Mapping Molecular Interactions in the Clostridium difficile Infected Gastrointestinal Tract Using Multimodal Imaging Mass Spectrometry -- Detection, Identification and Monitoring of Chemical Warfare Agents a comparison between on-field and in-lab approach -- New tools for rapid and sensitive detection of water contamination: whole-cell biosensors and cell-free TX-TL systems -- A Novel Origami Paper-Based Chemiluminescent Biosensor Integrated With A Smartphone Device for Organophosphorus Compounds Detection -- Solid-phase microextraction combined with microwave-assisted extraction using eco-friendly solvents as a new approach for the analysis of toxic compounds from environmental solid matrices -- Recent advances in MALDI mass spectrometry imaging: a cutting-edge tool for the diagnosis of thyroid nodules -- 26. Luminescent Polymeric Nanovectors loaded with Darunavir for treatment of HIV-Associated Neurological Diseases -- Investigation of the N-Glycoproteome in the Urinary Exosomes: Technical Challenges by Technical Challenges -- Fluoroquinolones In Water: Removal Attempts By Innovative AOPs -- Evaluation of Surface Second Harmonic Generation SSHG for Detection of Antibody-Antigen Interactions -- Impact of asbestos-related toxicity on Italian working population: preliminary incidence data from the last 5 years across the whole country -- Magnetically Targeted Delivery of Sorafenib through Magnetic Solid Lipid Nanoparticles towards Treatment of Hepatocellular Carcinoma -- Identification of Some Organic Solvents During Regular Forensic Determination of Alcohols in Blood and Bioliquids.

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### Sommario/riassunto

This book critically assesses the current state of knowledge on new and important detection technologies, e.g. mass spectrometry, tandem mass spectrometry, biosensor detection and tissue imaging, in connection with toxic chemical and biological agents. In general, the main topics discussed concern the risks and consequences of chemical and biological agents for human health in general, with special emphasis on all biochemical and metabolic pathways including the reproductive system. The exposome, genetic risks and the environment, various health hazard agents, risk assessment, environmental assessment and preparedness, and analysis of sub-lethal effects at the molecular level are also discussed. In closing, the book provides comprehensive information on the diagnosis of exposure, and on health concerns related to toxic chemical and biological agents. .

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