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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Mass Spectrometry for Proteomics-based Investigation -- MALDI profiling and applications in medicine -- Simplifying the proteome: Analytical strategies for improving peak capacity -- Quantitative Shotgun Proteomics with Data-Independent Acquisition and Traveling Wave Ion Mobility Spectrometry: A Versatile Tool in the Life Sciences -- Stable Isotope Labeling by Amino Acids in Cell Culture (SILAC) for Quantitative Proteomics -- Utility of Computational Structural Biology in Mass Spectrometry -- Affinity – Mass Spectrometry Approaches for Elucidating Structures and Interactions of Protein – Ligand Complexes -- Neurological Analyses: Focus on Gangliosides and Mass Spectrometry -- Mass Spectrometric Analysis of Post-translational Modifications (PTMs) and Protein-Protein Interactions (PPIs) -- Applications for Mass Spectrometry in the Study of Ion Channel Structure and Function -- A Mass Spectrometry View of Stable and Transient Protein Interactions -- Mass Spectrometry-Based Tissue Imaging of Small Molecules -- Redox Proteomics: from Bench to Bedside -- Analysis of Fluorinated Proteins by Mass Spectrometry -- Mass Spectrometry for Proteomics-Based Investigation Using the

Zebrafish Vertebrate Model System -- Mass Spectrometry-Based Biomarkers in Drug Development -- Detection of Bio medically Relevant Stilbenes from Wines by Mass Spectrometry -- Mass Spectrometric DNA Adduct Quantification by Multiple Reaction Monitoring and its Future Use for the Molecular Epidemiology of Cancer -- Using Breast Milk to Assess Breast Cancer Risk: The Role of Mass Spectrometry-Based Proteomics -- Cancer Secretomes and their Place in Supplementing other Hallmarks of Cancer -- Thioestrepton, a Natural Compound that Triggers Heat Shock Response and Apoptosis in Human Cancer Cells: a Proteomics Investigation -- Using Proteomics to Unravel the Mysterious Steps of the HBV life-cycle -- Oxidative Stress and Antibiotic Resistance in Bacterial Pathogens: State of the Art, Methodologies and Future Trends -- Proteomic Approaches to Dissect Neuronal Signalling Pathways -- Investigating a Novel Protein Using Mass Spectrometry: the Example of Tumor Differentiation Factor (TDF) -- Mass Spectrometry for the Study of Autism and Neurodevelopmental Disorders -- Biomarkers in Major Depressive Disorder: the Role of Mass Spectrometry -- Application of Mass Spectrometry to Characterize Localization and Efficacy of Nanoceria in vivo -- Bottlenecks in Proteomics.

Sommario/riassunto

This volume explores the use of mass spectrometry for biomedical applications. Chapters focus on specific therapeutic areas such as oncology, infectious disease and psychiatry. Additional chapters focus on methodology as well as new technologies and instrumentation. This volume provides readers with a comprehensive and informative manual that will allow them to appreciate mass spectrometry and proteomic research but also to initiate and improve their own work. Thus the book acts as a technical guide but also a conceptual guide to the newest information in this exciting field. Mass spectrometry is the central tool used in proteomic research today and is rapidly becoming indispensable to the biomedical scientist. With the completion of the human genome project and the genomic revolution, the proteomic revolution has followed closely behind. Understanding the human proteome has become critical to basic and clinical biomedical research and holds the promise of providing comprehensive understanding of human physiological processes. In addition, proteomics and mass spectrometry are bringing unprecedented biomarker discovery and are helping to personalize medicine.
