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Nota di contenuto	Clinical Proteomics; Contents; Editor's Overview; Acknowledgements; List of Contributors; I Technologies; 1 Preanalytical Issues in Clinical Proteomic Studies; 1.1 Introduction; 1.2 Preanalytical Factors; 1.2.1 Biological Variation; 1.2.1.1 Intrinic Influences/Factors; 1.2.1.2 Extrinsic Influences/Factors; 1.2.2 Technical Variables; 1.2.2.1 Specimen/Sample Collection Mode; 1.2.2.2 Type of Sample Container; 1.2.2.3 Sample Processing and Handling Conditions; 1.2.2.4 Sample Storage; 1.3 Summary and Concluding Remarks; 2 Protein Separation by Two-Dimensional Electrophoresis; 2.1 Introduction 2.2 2DE: Protein Solubilization and Sample Preparation2.3 2DE: Protein Separation; 2.3.1 Focusing in the First Dimension; 2.3.2 Advances in IEF; 2.4 Improving Proteomic Coverage by Subcellular Fractionation; 2.5 Protein Detection and Image Analysis; 2.6 The Future of 2DE; 3 Protein Separation: Liquid Chromatography; 3.1 Introduction; 3.2 Liquid Chromatography; 3.2.1 HPLC Separation Principles; 3.2.2 Reversed-Phase LC (RPLC, 1DLC); 3.2.3 Affinity Chromatography; 3.2.4 Size-Exclusion Chromatography; 3.2.5 Ion-Exchange Chromatography; 3.2.6

Two-Dimensional LC

3.2.6.1 Chromatofocusing to Reversed Phase3.2.6.2 Ion-Exchange-Reversed-Phase Liquid Chromatography; 3.2.7 Three-Dimensional Liquid Chromatography; 3.2.8 LC Image Analysis Requirement; 3.2.9 Mass Spectrometry for LC; 3.2.9.1 MALDI-TOF MS; 3.2.9.2 ESI-MS/MS; 3.3 Conclusions; 4 HPLC in Protein Discovery; 4.1 Introduction; 4.2 LC-Based Approaches in Peptide Mass Mapping; 4.3 LC-Based Approaches in Protein Mapping; 4.4 Orthogonal 2D HPLC Separations; 4.5 Conclusion; 5 IEF Analysis of Peptides for Biomarkers Discovery; 5.1 Introduction; 5.2 Background; 5.2.1 Isoelectric Focusing
5.2.2 Shotgun Proteomics5.2.3 Shotgun IEF; 5.3 Shotgun IEF Workflow; 5.4 Applications; 5.5 Discussion and Outlook; 6 Capillary Electrophoretic Separations for Clinical Proteomics; 6.1 Introduction; 6.2 (Single-Dimension) Capillary Electophoretic Separation; 6.3 Capillary Electrophoresis-Based Multidimensional Separations; 6.3.1 Capillary Liquid Chromatography-Capillary Electrophoresis; 6.3.2 Capillary Electrophoresis-Capillary Electrophoresis; 6.3.3 Capillary Electrophoresis-Liquid Chromatography; 6.3.3.1 Characterization of Human Saliva Proteome; 6.3.3.2 Targeted Tissue Proteomics
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8.4 Antibody Microarrays with Lectin Detection

Sommario/riassunto

Unparalleled in its scope and depth, this book brings together proteomic approaches in diagnosis and treatment from all clinical fields, including clinical toxicology. The result is a new discipline in molecular medicine that will revolutionize the treatment and prevention of cancer, stroke and other severe diseases.Following an overview of clinical proteomics, the authors look at the technologies available, before moving on to cancer, cardiopulmonary disease, diabetes and stroke. A whole section is devoted to toxicity and the work is rounded off with a discussion of the future of clinical