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Nota di contenuto	History of Plant Lectin Research -- Fungal Lectins a Growing Family -- The "White Kidney Bean Incident" in Japan -- Hemagglutination (Inhibition) Assay -- Preparation of Affinity Adsorbents and Purification of Lectins from Natural Sources -- High-Performance Lectin Affinity Chromatography -- Determination of Glycan Motifs Using Serial Lectin Affinity Chromatography -- Lectin-Probed Western Blot Analysis -- Solid-Phase Assay of Lectin Activity Using HRP-conjugated Glycoproteins -- Sialidase-dependent Binding Assay for Influenza and Related Viruses -- Lectin Affinity Electrophoresis -- Capillary-Based Lectin Affinity Electrophoresis for Interaction Analysis between Lectins and Glycans -- Basic Procedures for Lectin Flow Cytometry -- Histochemical Staining Using Lectin Probes -- Equilibrium Dialysis using Chromophoric Sugar Derivatives -- Centrifugal Ultrafiltration-HPLC Method for Interaction Analysis between Lectins and Sugars -- Surface Plasmon Resonance as a Tool to Characterize Lectin-carbohydrate Interactions -- Isothermal Calorimetric Analysis of Lectin-sugar Interaction -- Carbohydrate-Lectin Interaction Assay by Fluorescence Correlation Spectroscopy Using Fluorescence-Labeled Glycosylasparagines -- Lectin-Based Glycomics: How and When Was the Technology Born? -- Frontal Affinity Chromatography (FAC): Theory and Basic Aspects -- Advanced FAC with a Library of Fluorescent-

Labeled Oligosaccharides -- Differential Glycan Analysis of an Endogenous Glycoprotein: Toward Clinical Implementation. From Sample Pretreatment to Data Standardization -- Lectin-Microarray Technique for Glycomic Profiling of Fungal Cell Surfaces -- Application of Lectin Microarray to Bacteria Including *Lactobacillus casei* Shirota -- Live C.

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Sommario/riassunto

Lectins: Methods and Protocols summarizes classic lectin technologies and advanced techniques with high throughputs and sensitivities. Chapters include methods and techniques for serial lectin-affinity chromatography procedure, lectin-probed western blot and histochemical analyses, quantitative interaction analyses based on equilibrium dialysis, isothermal calorimetry, surface plasmon resonance, techniques for elucidating functions of endogenous animal lectins, advanced methods on “engineer” novel lectins by evolutionary concepts, and special equipment. Written in the highly successful Methods in Molecular Biology series format, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and key tips on troubleshooting and avoiding known pitfalls. Authoritative and practical, Lectins: Methods and Protocols seeks to aid not only lectin specialists but also non-experts including both young scientists.

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