

1. Record Nr.	UNINA9910139986703321
Titolo	Carbohydrate-based vaccines and immunotherapies [[electronic resource] /] / edited by Zhongwu Guo, Geert-Jan Boons
Pubbl/distr/stampa	Hoboken, N.J. ; ; Oxford, [UK], : Wiley, c2009
ISBN	1-282-36851-6 9786612368516 0-470-47328-2 0-470-47327-4
Descrizione fisica	1 online resource (436 p.)
Collana	Wiley series in drug discovery and development
Altri autori (Persone)	GuoZhongwu BoonsGeert-Jan
Disciplina	616.07/9 616.079
Soggetti	Carbohydrates - Immunology Vaccines Glycoconjugates - Immunology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	CARBOHYDRATE-BASED VACCINES AND IMMUNOTHERAPIES; CONTENTS; Preface; Contributors; 1 Glycobiology and Immunology; 1.1 Introduction; 1.2 Glycobiology; 1.2.1 Glycosylation-Is It Worth the Cost?; 1.2.2 Glycan Biosynthesis-A Dauntingly Complex Process; 1.2.3 Glycoproteins; 1.2.4 Lipid-Based Glycans; 1.2.5 Polysaccharides: Glycosaminoglycans and Bacterial Capsular Components; 1.3 The Immune System; 1.3.1 Introductory Comments; 1.3.2 Overview of the Immune System; 1.3.3 Glycoimmunobiology; 1.3.4 Interplay between Glycosylation and Sugars: a Two-Way Street; 1.4 Carbohydrate Antigens 1.4.1 Carbohydrate Antigens in Humans1.4.2 Carbohydrates and Pathogens; 1.4.3 Carbohydrate-Based Vaccines; 1.4.4 Concluding Comments: Building on Success; Acknowledgment; References; 2 Preparation of Glycoconjugate Vaccines; 2.1 Introduction; 2.2 Capsular Polysaccharide-Protein Conjugates; 2.2.1 Haemophilus influenzae Type b; 2.2.2 Streptococcus pneumoniae; 2.2.3 Neisseria meningitidis; 2.2.4 Salmonella typhi Vi; 2.2.5 Group B Streptococcus; 2.2.6 Staphylococcus

aureus Types 5 and 8; 2.3 Lipopolysaccharide (LPS) and Lipooligosaccharide (LOS) Conjugates; 2.3.1 Escherichia coli O157 2.3.2 Vibrio cholerae O1 and O1392.3.3 Shigella dysenteriae Type 1, sonnei and flexneri 2a; 2.3.4 Neisseria meningitidis and Nontypeable Haemophilus influenzae; 2.4 Total Synthetic Glycoconjugate Vaccines; References; 3 Adjuvants for Protein- and Carbohydrate-Based Vaccines; 3.1 Introduction; 3.2 Initiation and Stimulation of Adaptive Responses; 3.3 "Old" Adjuvants and Formulations; 3.3.1 Aluminum; 3.3.2 Emulsions; 3.3.3 Saponins, QS21, and ISCOMS; 3.3.4 Liposomes and Microparticles; 3.3.5 Antigen/Formulation Targeting; 3.3.6 Induction of CD8 CTLs with Soluble Antigens 3.4 Renaissance of Innate Immunity 3.4.1 Toll-Like Receptors: Agonists and Roles; 3.4.2 Non-TLRs Innate Receptors; 3.4.3 Other Receptors Involved in Antigen Capture and Recognition; 3.5 From Basic Research to Practical Applications: Identification of New Adjuvants; 3.5.1 TLR Synthetic Agonists; 3.5.2 Combination of PRR Agonists; 3.6 Adjuvants for Carbohydrate-Based Vaccines; 3.6.1 Td and Ti B-Cell Responses; 3.6.2 Adjuvants for "Free" Polysaccharides (Ti Antigens); 3.6.3 Adjuvants for Glycoconjugate Vaccines (T-Dependent Antigens) 3.7 Combinations of Adjuvants: Preclinical and Clinical Developments 3.8 Immunomodulation of Existing Responses: Adjuvants for Therapeutic Vaccines; 3.9 Take Another Route; 3.9.1 Adjuvants for Mucosal Immunization; 3.9.2 Epidermal or Intradermal Routes; 3.10 Practical Aspects of Adjuvant Development; 3.10.1 Regulatory Aspects; 3.10.2 Safety versus Efficacy: Risk-Benefit Ratio; 3.11 Preclinical Models Used in Adjuvant Development; 3.11.1 Animal Models; 3.11.2 In vitro Models; 3.12 Conclusions and Perspectives; Acknowledgment; References; 4 Carbohydrate-Based Antibacterial Vaccines 4.1 Introduction

Sommario/riassunto

The fundamental science and the latest developments in carbohydrate-based vaccines The relatively new field of glycoimmunology has emerged from the marriage of glycobiology and immunology, in recognition of the important role carbohydrates play as antigenic determinants. Carbohydrate-Based Vaccines and Immunotherapies comprehensively reviews the state of this exciting field, offering a single source for both the fundamental science and the latest developments. With contributions by leading experts, this resource covers the design, synthesis, evaluation, and applications of va
