Carbohydrate-Based Vaccines and Immunotherapies
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**DESCRIPTION**

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 various carbohydrate-based vaccines, including polysaccharides, neoglycoproteins, and neoglycolipids. The text approaches vaccine design from a chemical and molecular focus, staying in line with current advances.

Key topics covered by *Carbohydrate-Based Vaccines and Immunotherapies* include:

- Recent developments towards clinically useful vaccines against bacteria, viruses, parasites, and fungi
- Using adjuvants to improve immunogenicity and/or immunological properties of vaccines
Choosing and designing proper adjuvants for specific targets

• Abnormal carbohydrates expressed by tumors

• Carbohydrate-based therapeutic cancer vaccines or cancer immunotherapy

• Clinical trials results for synthetic cancer vaccines

• Glycoengineering of cell surface carbohydrates and its anticancer applications

• Using cell surface carbohydrates for disease diagnosis

A single, convenient source of state-of-the-art information from leading authorities in the field, *Carbohydrate-Based Vaccines and Immunotherapies* is an essential reference for organic chemists and biochemists, academic researchers, and other students and professionals involved in vaccine design.

⚠️ ABOUT THE AUTHOR

**Zhongwu Guo** is a Professor of Chemistry at Wayne State University. The winner of the American Chemical Society's 2005 New Investigator Award in Carbohydrate Chemistry, Dr. Guo serves on the editorial board of the Journal of Carbohydrate Chemistry, speaks regularly at international conferences, and has authored more than ninety peer-reviewed publications.

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