

1. Record Nr.	UNINA9910350355003321
Titolo	Glycoscience: Basic Science to Applications : Insights from the Japan Consortium for Glycobiology and Glycotechnology (JCGG) // edited by Naoyuki Taniguchi, Tamao Endo, Jun Hirabayashi, Shoko Nishihara, Kenji Kadomatsu, Kazunari Akiyoshi, Kiyoko F. Aoki-Kinoshita
Pubbl/distr/stampa	Singapore : , : Springer Singapore : , : Imprint : Springer, , 2019
ISBN	981-13-5856-7
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (XV, 405 p. 133 illus., 104 illus. in color.)
Disciplina	615.19
Soggetti	Pharmaceutical technology Medical biochemistry Molecular biology Medical genetics Pharmaceutical Sciences/Technology Medical Biochemistry Molecular Medicine Gene Function
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Introducion -- Part. 1. Future technological advances to elucidate the structures and functions of glycans -- Chapter 1. Structural analysis of glycans (analytical and detection methods) -- Chapter 2. Structural biology of glycans -- Chapter 3. Chemical and enzymatic synthesis and production of glycans -- Chapter 4. Technologies to elucidate functions of glycans -- Part 2. Glycans and biopharmaceuticals -- Chapter 1. Antibody pharmaceuticals -- Chapter 2. Standard glycan library -- Chapter 3. Mass production in silk worm and yeast -- Chapter 4. Glycoengineering -- Chapter 5. Glycomimetics -- Chapter 6. Glycan vaccine -- Part 3. Sugar chains (Glycans) involved in medical science and medical care -- Chapter 1. Glycan function in development and evolution -- Chapter 2. Glycans in nervous system -- Chapter 3. Glycans in osseous tissue and articulation -- Chapter 4. Glycans in infection and immunity -- Chapter 5. Next generation medical care --

Chapter 6. Life-style related disease and aging -- Chapter 7. Congenital disorders of glycosylation (CDG), neuromuscular related diseases -- Chapter 8. Glycan biomarkers for cancer and various disease -- Part 4. Food implicated in glycans and its function -- Part 5. Glycan-related materials and their use for biomaterials -- Part 6. Educational materials and training for glycosciences.

Sommario/riassunto

This book presents the state of the art in glycoscience and proposes a road map for the coming decade, focusing on the potential of glycoscience research to shed light on important basic science issues and give rise to exciting new applications, especially in the field of diagnosis and therapeutics. Individual sections offer in-depth coverage of various topics relating to glycans and biopharmaceuticals, glycans in medical science and medicine, glycan technologies, glycans in food and nutrients, and glycan-related materials and their uses. In addition, the book presents an exemplary training course on glycomics and highlights educational and analytical web resources, and also includes glossaries and boxes summarizing key facts to ensure ease of understanding for non-expert readers and students. Written by more than 150 active participants in the Japan Consortium for Glycobiology and Glycotechnology (JCGG), whose goal is to promote the development of interdisciplinary glycoscience and establish a global network in the field, it is a valuable resource for students, postdocs, and researchers in the life sciences as well as for stakeholders and professionals in government, funding agencies and industry.
