

Handbook of GLYCOMICS

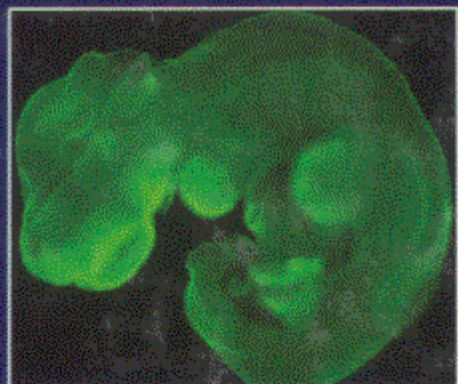
EDITED BY

Richard D. Cummings, Ph.D.

Department of Biochemistry, Emory University
School of Medicine, Atlanta, Georgia, USA

J. Michael Pierce, Ph.D.

Complex Carbohydrate Research Center and UGA Cancer
Center, University of Georgia, Athens, Georgia, USA



KEY FEATURES

- *Brings together contributions from experts in biology, biochemistry, bioinformatics, biotechnology, and medicine*
- *Highlights chapters devoted to congenital disorders of glycosylation, cancer glycomics, immune cell glycomics, glycobioinformatics, and mass spectrometry for glycan analysis*
- *Includes discussions of glycan characterization, glycoproteomics, and transcriptome analytic approaches*

Written for a broad range of readers from glycobiology investigators to researchers and students in genomics, proteomics, systems biology, bioinformatics and novel therapeutics, this handbook defines why all complex carbohydrates in organisms need to be studied. It begins by describing analytic approaches and bioinformatics, and moves on to provide a detailed discussion of relevant databases, data integration, and analysis. A discussion of various model organisms and pathogen glycomes is then followed by detail on therapeutic approaches to human disorders of glycosylation. Structure and function of glycomes are included along with state-of-the-art technologies and systems approaches to the analysis of glycans.

RELATED TITLES

Bioconjugate Techniques, Second Edition

Hermanson • 978-0-12-370501-3 • Apr 08 • 1323 pgs

Genomic and Personalized Medicine, 2-vol set

Willard and Ginsburg • 978-0-12369420-1 • Nov 08 • 1558pgs

BACK COVER IMAGE:

Whole mount staining with Tn antibody (Alexa488-labeled anti-Tn mAb) showing universal expression of Tn antigen on the surface of all identifiable cells in Cosme-7 embryos at E10.5. The embryo was visualized under a fluorescent microscope at 20x magnification. (Courtesy of Yingchun Wang, Tongzhong Ju, Xiaokun Ding, and Richard D. Cummings, Emory University School of Medicine, Atlanta, GA)



ACADEMIC PRESS

An imprint of Elsevier
elsevierdirect.com

ISBN 978-0-12-573600-0

