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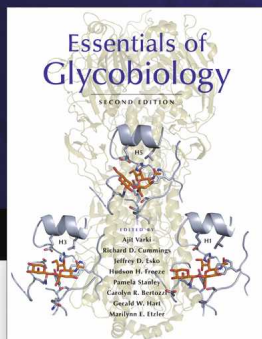
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ESSENTIALS OF GLYCOBIOLOGY

SECOND EDITION

Edited by Ajit Varki, *University of California, San Diego*, Richard D. Cummings, *Emory University School of Medicine, Atlanta*, Jeffrey D. Esko, *University of California, San Diego*, Hudson H. Freeze, *Burnham Institute for Medical Research, La Jolla*, Pamela Stanley, *Albert Einstein College of Medicine of Yeshiva University, New York*, Carolyn R. Bertozzi, *University of California, Berkeley*, Gerald W. Hart, *Johns Hopkins University School of Medicine, Baltimore*, and Marilynn E. Ertzler, *University of California, Davis*

The sugar chains of cells—known collectively as glycans—play a variety of impressive, critical, and often surprising roles in biological systems. Glycobiology is the study of the roles of glycans in the growth and development, function, and survival of an organism. Glyco-related processes, described in vivid detail in the text, have become increasingly significant in many areas of basic research as well as biomedicine and biotechnology.

This new edition of *Essentials of Glycobiology* covers the general principles and describes the structure and biosynthesis, diversity, and function of glycans and their relevance to both normal physiologic processes and human disease. Several new chapters present significant advances that have occurred since the publication of the first edition. Three sections of note describe organismal diversity, advances in our understanding of disease states and related therapeutic applications, and the genomic view of glycobiology. “Glycomics,” analogous to genomics and proteomics, is the systematic study of all glycan structures of a given cell type or organism and paves the way for a more thorough understanding of the functions of these ubiquitous molecules.

The first edition of *Essentials of Glycobiology* represented also a notable experiment in publishing, as it became one of the first electronic textbooks. And, now, in recognition of its wide audience and the changing ways in which researchers and students learn and access information, the new edition of *Essentials* will be made available online simultaneously with the print edition. This novel experiment is the result of the collaborative efforts of the Cold Spring Harbor Laboratory Press, the National Center for Biotechnology Information, and the editors of the book. Written and edited by glycobiologists with experience in teaching and in research, this volume will be an invaluable resource, both for students and for established investigators in fields such as developmental biology, cell biology, neuroscience, immunology, and biochemistry who require a complete yet concise introduction to this burgeoning field.

Published in October 2008, 784 pp., illus., glossary, study guide, index

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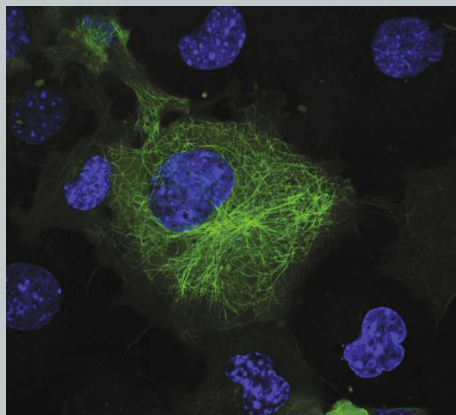
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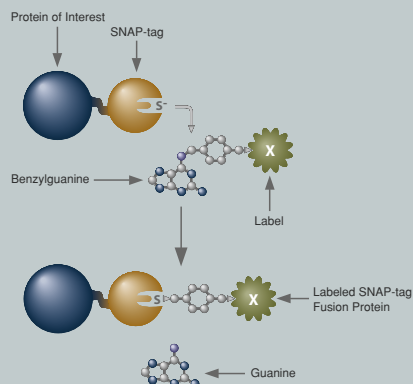
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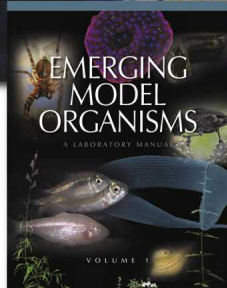
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