GLYCOLYSIS

Tissue-Specific Metabolic Regulation in Physio-Pathological Conditions

Edited by

Rita Ferreira, Pedro Fontes Oliveira and Rita Nogueira-Ferreira

Glycolysis: Tissue-Specific Metabolic Regulation in Physio-pathological Conditions provides an integrated overview of glycolysis, spanning basic biochemistry, pathophysiology, and therapeutic applications. It also instructs in methods available to study the involvement of the glycolytic events in healthy biology and disease pathology. The book begins with an overview of advances in the knowledge of glycolysis regulation, followed by chapters dedicated to glycolysis physiology in organs and systems, pathologic conditions related to glycolytic alterations, glycolysis as a therapeutic target and in drug discovery efforts, and methodological approaches to advance in research focused on glycolysis. Disease areas considered range from cancer to heart failure, diabetes, inborn glycolytic pathway defects, hematologic malignancies, osteoporosis, neurodegenerative diseases, and viral infections. Omics and computational modeling, interactive study methods, and glycolysis flux measurement are described in detail, with step-by-step descriptions of experimental protocols, setup, and analysis.

Key features

- Features chapter contributions from international veteran leaders in the field
- Spans fundamental aspects of glycolysis, pathophysiology, and drug discovery
- Includes step-by-step instruction in a range of research protocols, ranging from omics to interactive analysis and measuring glycolysis flux

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9780323917049 生物科学
分类码:Q556
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ACADEMIC PRESS
An imprint of Elsevier
elsevier.com/books-and-journals

ISBN 978-0-323-91704-9