Essays in Biochemistry from Portland Press

Essays in Biochemistry: Regulation of Gene Expression

Edited by K Chapman, The University of Edinburgh, UK

1 85578 138 7 Paperback April 2001 132 pages £19.00

In all organisms, precise and exquisite control of the expression of the many thousands of genes comprising their genomes is essential for correct development, growth and function. The essays in this volume have been written by international experts working at the forefront of current research. They provide insights into current work and concepts which are elucidating the mechanisms which lead to protein synthesis in the correct cell, at the precise time and in response to appropriate signals.

The Essays contained in this volume are thought provoking, clearly written, well illustrated and accessible and will enable senior undergraduate and junior postgraduate students to appreciate the amazing subtlety and diversity of gene regulatory mechanisms.

Essays in Biochemistry: Molecular Motors

Edited by SJ Higgins, University of Leeds, UK and G Banting, University of Bristol, UK

1 85578 103 4 Paperback June 2000 200 pages £19.00

"the book on molecular motors makes for a terrific read, while riding in a car, a train, an airplane, or just sitting at your desk" Trends in Biochemical Sciences

Biological systems abound with examples of molecular motors — biological machines for converting the chemical energy of ATP into mechanical movement by cells — they play pivotal roles in diverse cellular function. This volume, covers many of the most exciting developments in the field.

- All of the main motor systems are featured, giving wide coverage.
- Consists of short punchy review articles, making it easy to read.
- The application of gene-cloning methods and the recent advances are described.
- Human disorders involving defects in molecular motor systems such as hearing loss and heart disease are covered.

The Nobel Prize for Chemistry was awarded to John Walker and Paul Boyer in 1997 for their work in elucidating the mechanism of the rotary generator of ATP in the mitochondrion, the F₁-ATPase. This brought the new developments in the field of molecular motors to the attention of the whole scientific community and, via the media, to a wider world audience. This volume aims to inspire young scientists to want to work in this area.

Essays in Biochemistry: Metalloproteins

Edited by D Ballou, University of Michigan, USA

1 85578 106 9 Paperback December 1999 200 pages £19.00

Metals are involved in most segments of the chemistry of life, including respiration, numerous steps of metabolism, photosynthesis, nitrogen fixation, nerve transmission, signal transduction, muscle contraction, oxygen transport and protection from xenobiotic compounds. In addition, metals are used in medicine as therapeutic agents. This volume describes many of the roles of metals in a variety of circumstances that are used widely in biology.

The 12 chapters of this volume are written by several of the best-known experts in their specialities.

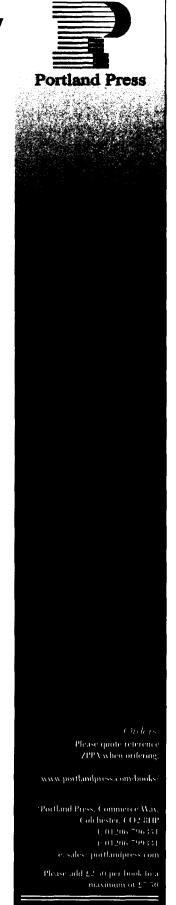
Essays in Biochemistry: Molecular Trafficking

Edited by P Bernstein, The Journal of Experimental Medicine, New York, USA

1 85578 131 X Paperback October 2000 200 pages £19.00

This volume of Essays in Biochemistry is a collection of review articles describing how molecules (proteins and nucleic acids) are targeted to, and transported across, various membrane-bound organelles within eukaryotic cells.

The 1999 Nobel Prize in Physiology or Medicine was awarded to Dr Gunter Blobel "for the discovery that proteins have intrinsic signals that govern their transport and localization in the cell". The award acknowledges the importance of the study of how newly synthesized protein and RNA find their correct destination within the cell. This volume summarises advances being made in this field of research. Students (and their teachers) who are undertaking advanced studies in cell biology will find this book extremely useful.



Textbooksfrom Portland Press



Life Chemistry & Molecular Biology

By EJ Wood, University of Leeds, UK, CA Smith, Manchester Metropolitan University, UK and WR Pickering, Canterbury, UK

1 85578 064 X Paperback 1996 230 pages £16.00

Life Chemistry and Molecular Biology explains biological principles and their applications in commercial, medical, ecological and physiological contexts. This book uses a unique and innovative format, consisting of a series of annotated diagrams with linking text, making it an ideal study-guide for both college and university students of biochemistry and other life-sciences, medical and allied health sciences as well as a valuable tool for lecturers.

"It is a very pleasant book, which allies rigorous biochemical and molecular facts with an amazing typographical presentation and illustration... I recommend greatly this book for all readers and also because of its very cheap price." Cellular and Molecular Biology

Fundamentals of Enzyme Kinetics

By A Cornish-Bowden, CNRS, Marseilles, France

1 85578 072 0 Paperback 1995 352 pages £18.00

This book describes the fundamentals of enzyme kinetics, with an emphasis on principles rather than an encyclopaedic accumulation of facts, to allow readers to fill gaps for themselves and proceed in the subject as far as they need to go. It provides the basis for understanding enzyme kinetics, whether at the level of the undergraduate, the research student or the researcher.

"Cornish-Bowden's recently revised Fundamentals of Enzyme Kinetics allows me to offer praise while retaining my self respect, for this is a truly excellent book..."

Ronald Duggleby, Protein Science

Metabolic Regulation: A Human Perspective

By K N Frayn, Radcliffe Infirmary, Oxford, UK

1 85578 048 8 Paperback 1996 286 pages £18.95

Metabolic Regulation: A Human Perspective conveys a modern picture of metabolism which shows there is more to understanding metabolism than being able to reproduce pathway sequences. It aims to make the study of metabolic regulation more interesting to students by placing it firmly in the context of normal daily life.

Metabolic Regulation: A Human Perspective will be invaluable to students across a broad range of allied health sciences, including nutrition, dietetics, sports science, and nursing. This volume will also be extremely useful to both college and university students of biochemistry, physiology, medicine and the life sciences.

"I congratulate the author for an excellent book which puts his thoughts together in a concise yet informative way." Trends in Endocrinology and Metabolism

Understanding the Control of Metabolism

By D Fell, Oxford Brookes University, UK

1 85578 047 X Paperback 1996 300 pages £18.95

This book explains how a new view on the regulation of metabolism has been opened by the theory of Metabolic Control Analysis. It is the first text-book to bring together a full explanation of the new theory and its experimental implementation since its origins in the 1970s. As well as noting the differences between Metabolic Control Analysis and traditional metabolic biochemistry, the book sets the background in enzyme kinetics and metabolic investigations on which the new theory draws.

Understanding the Control of Metabolism is written primarily as a course book for undergraduates who have already taken a basic course in biochemistry and are now studying enzymology and metabolism in more detail.

"Buy, beg or borrow this excellent book, but READ it if you ever use the words "control" or "regulate" in your thinking, research, or teaching. It may change your whole way of looking at one of the main strands of biochemistry." **Protein Science**

