

Biochemical Society Symposia



From Protein Folding to New Enzymes

Edited by A Berry and S Radford, University of Leeds, UK

1 85578 143 3 Hardback Summer 2001 250 pages £65.00

From Protein Folding to New Enzymes is a collection of articles written by speakers at the 68th Annual Symposium of the Biochemical Society held at the University of Leeds in April 2000.

This book deals with the structures of proteins, the consequences of misfolding transitions in human disease, and the engineering of structures for new functions. The articles present an up-to-date view of protein folding *in vitro* and *in vivo*, the role of chaperones in folding, and the consequences of protein misfolding, for example in amyloid diseases. In addition, simulations of folding mechanisms, protein design principles, and protein engineering to produce novel enzymes are discussed.

This book is of interest for all who work in Biochemistry, Molecular Biology and Biophysics, especially Under Graduates, Post Graduates, Researchers and Lecturers.

Mitochondria and Cell Death

Edited by GC Brown, University of Cambridge, UK,
D Nicholls, University of Dundee, UK,
and C Cooper, University of Essex, UK

1 85578 125 5 Hardback October 1999 240 pages £65.00

This book reviews the involvement of mitochondria in cell death and disease. This is a rapidly expanding field of major importance to both basic biology and medical science. Clear and comprehensive chapters from some of the key researchers in the field cover most aspects of the subject from the molecular to the *in vivo* level. The role of mitochondria in neurodegenerative, inflammatory and ischaemic diseases, as well as necrosis, apoptosis and ageing is reviewed.

Neuronal Signal Transduction and Alzheimer's Disease

Edited by C'O Neill, University College, Cork, Ireland
and B Anderton, Institute of Psychiatry, London, UK

1 85578 133 6 Hardback February 2001 250 pages £65.00

Neuronal Signal Transduction and Alzheimer's Disease brings together key researchers from diverse biochemical areas to focus upon signal transduction dysfunction in Alzheimer's disease.

Although specifically focused upon Alzheimer's this book has many parallels in other neurodegenerative disorders and will be of interest to those studying neuronal cell development and function in health and disease.

Cell Behaviour: Control and Mechanism of Motility

Edited by J M Lackie, Yamanouchi Research Institute,
Oxford, UK, G A Dunn, and G E Jones,
The Randall Institute, King's College, London, UK

1 85578 124 7 Hardback December 1998 360 pages £65.00

The latest molecular and genetic advances in the study of the movement of cells are discussed in this title in the Symposia series.

The recent advances in identifying the molecular components of cell motility can be found in many publications but this text uniquely provides a synthesis of the molecular and sphenomenological aspects that will be required for an understanding of the controlling processes that underlie cell behaviour.

"The organizers of the conference [and editors of the volume], Lackie, Graham Dunn and Gareth Jones, have deftly balanced multiple viewpoints ranging from single-molecule characterization to tissue-level phenomenology. ...uniformly high quality" Cell

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Essays in Biochemistry Volume 37

Regulation of Gene Expression

Edited by K Chapman, University of Edinburgh, UK

I 85578 138 7 – Paperback – April 2001 – 200 pages – £19.00

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In all organisms, the precise and exquisite control of the expression of the many thousands of genes comprising their genomes is essential for correct development, growth and function.

This volume will guide you through the cellular processes that govern gene expression, starting with transcription initiation and highlighting universal principles.

Written by international experts working at the forefront of current research it provides insights into current work and concepts which are elucidating the mechanisms that lead to protein synthesis in the correct cell at the precise time and in response to appropriate signals.

Regulation of Gene Expression:

- **discusses** aspects of gene regulation by extracellular and intracellular signalling pathways.
- **illustrates** crucial importance in normal development and growth of the coupling of gene expression to cell cycle progression.
- **describes** the mechanisms by which information about the regulatory state of the gene is transmitted to a cell's descendants.
- **reviews** how transcriptional activity is coupled to progression through the cell cycle.
- **explains** the cellular decision-making processes that come into play once the cell's DNA has been damaged.
- **highlights** some of the exciting recent developments in gene regulation and points to the areas where dramatic progress in our understanding can be anticipated.

Contents

- Transcriptional regulation, a unifying mechanism, *M Ptashne and A Gann*
- Regulation of eukaryotic transcription initiation, *G Gill*
- Activation and repression of transcription initiation in bacteria, *G Lloyd, P Landini and S Busby*
- Signalling from the cell surface to the nucleus, *M Lee and S Goodbourn*
- Cell cycle control of transcriptional activity, *N La Thangue and N Shikama*
- Transcriptional regulation in the context of chromatin structure, *A Wolffe*
- Methylation in the control of gene expression in vertebrate development, *R Meehan and I Stancheva*
- Translational control in the regulation of gene expression, *C Proud*
- Cellular choices: to die or not to die, *D Harrison*
- Future perspectives, *N Hastie*

Essential reading for senior undergraduate and junior postgraduate students. It will also provide a useful addition to the bookshelves of many other biologists in research, teaching or industrial disciplines.

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