

Latest Titles from Portland Press



Portland Press

Regulatory Processes in Development

Edited by L Olsson, Uppsala University, Sweden and K-O Jacobson The Royal Swedish Academy of Sciences Stockholm, Sweden

1 85578 136 0 Hardback September 2000 210 pages £75.00

Sven Hörstadius was one of the great experimental biologists of the 20th century. His experiments on sea urchin larvae and his thorough analysis of the neural crest (and its importance for head development) have had a profound influence on many areas of modern developmental biology.

In 1998, leading researchers working in the field pioneered by Hörstadius celebrated the centennial of his birth by holding a symposium in his honour. Arising from that meeting, *Regulatory Processes in Development* gives an overview of the present state of two of the fields in which Hörstadius was most influential — echinoderm embryology and vertebrate head development — as well as encompassing other areas.

To address future prospects for experimental embryology, the symposium focused on new developments in the fields that were central to the approach of Hörstadius. Induction and pattern formation are old concepts that are now being redefined in molecular terms. The genetic control of development was beyond the grasp of Hörstadius, but is now being discovered at a breathtaking pace. The new relationship between evolution and development is explored by several authors.

The current excitement about developmental biology is felt throughout this volume, as the authors describe breakthroughs in our understanding of basic developmental processes and mechanisms. The book will be of great interest to researchers and graduate students in cell and developmental biology as well as to zoologists and evolutionary biologists.

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 September 2000 250 pages £65.00

The latest in the Biochemical Society Symposium series 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.

Mitochondria and Cell Death

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

1 85578 125 5 Hardback September 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. Each chapter is by a different set of authors describing one aspect of the field. Researchers and postgraduates throughout biology and medical science will want to read this book.

Lifelong Learning: Policy and Research

Edited by A Tuijnman, Stockholm University, Sweden and T Schuller, Birkbeck College, London, UK

1 85578 134 4 Hardback December 1999 250 pages £75.00

Lifelong learning covers a lot of ground; the questions posed to policy and to educational and social research are plentiful. This book offers a basis for scholarly debate on both the questions and the priorities. In setting out an array of diverse ideas, themes and questions, it sketches the outlines of an agenda which will help foster dialogue among researchers and policy makers on the 'contested territory' of lifelong learning.

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Essays in Biochemistry from Portland Press



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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.

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

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 F_1F_0 -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: Gene Regulation

Edited by K Chapman, The University of Edinburgh, UK

1 85578 138 7 Paperback Feb 2001 200 pages £19.00

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