

Receptor-Effects Coupling: A Practical Approach; Edited by E.C. Hulme; IRL; Oxford, 1990; xviii + 224 pages; £19.50

The book, 'Receptor-Effector Coupling, which has recently appeared in the 'Practical Approach' series from IRL Press and has been edited by E.C. Hulme, will be welcomed by both basic research scientists and people interested in using biological mechanisms as targets for developing new anti-cancer drugs. As is typical of the series, it is written as a clear series of practical guides on how to carry out studies on various aspects of receptor function.

The first chapter, by Sternweis and Pang, gives a straightforward description of the G proteins and their subunits. The book then follows on with a logical description of receptor-G protein complexes in solution, by Poyner. Studies on different tyrosine kinases are becoming of great interest to people working in many areas of control of growth and metabolism and the chapter by Cerione will be of particular interest to those who want to get involved in the study of growth factor receptor tyrosine kinase interactions. The chapter on measurement and control of intracellular calcium levels, by Alison Gurney, is typical of the book in that it not only provides very adequate practical instructions for experiments but also gives a thorough background for workers who may be new to the field.

The chapter by Mahadevan and Bell gives a very useful description of various methods of assaying tyrosine kinase activity, both those using radioactivity and those using anti-

phosphotyrosine antibodies. This chapter is essential reading for anyone who is about to get involved in this particular field.

The final chapter, by the Editor himself, on receptor binding studies; a brief outline, is a very appropriate way of finishing the book. It contains a lot of useful background information together with some valuable tips. For example, Dr. Hulme points out that 'the ability of the Scatchard plot to lead the eye on is notorious and may entice one to make a large extrapolation from a limited linear segment of the plot to yield an apparent receptor number value'. This is a mistake which has been made by a great many people who have become involved in receptor binding studies and it reflects the approach by Dr Hulme for the whole chapter. I would strongly recommend that all people involved in any type of receptor binding study should read this chapter very thoroughly.

Overall Dr. Hulme has edited this book in a very clear manner such that the various chapters, although written by different authors, appear in very similar style. This is a most important job for editors of such practical volumes and makes the reading of the book much more easy. I am sure that a great many laboratories will buy this book not just for the intellectual content but for the great amount of very useful practical advice given. At £19.50, it is, typically of the practical approach series, extremely good value for money.

Robin E. Leake

Membrane Technology (Serono Symposium Publications, Volume 64); Edited by Roberto Verna; Raven Press; New York, 1991; xii + 153 pages; \$ 87.00

This small volume contains 14 papers presented at the International Symposium held in Rome in June 1989 with the objective of exploring the applications of membrane technology to diagnostics and therapeutics. In reality the papers contain few direct applications of membrane technology to either diagnostics or therapeutics, but describe a range of techniques used in the scientific study of membranology, which to varying degrees help us to better understand membrane processes *in vivo*. One hopes that such understanding forms the basis of future developments in the diagnosis and treatment of disease. All the papers are concise and well presented and in this review I will draw attention to a few of the topics covered with particular reference to new developments, bearing in mind the meeting was held over two years ago.

The rapid growth in molecular biology has enabled transport and receptor proteins to be engineered and the strategy of this approach is usefully reviewed by Montal with particular reference to sodium channel proteins and the nicotine acetylcholine receptor. In a second paper by Montal (with Gambale) the effect of lipid environment on gramicidin A and the tetanus toxin channel is briefly considered.

A new patch-clamp technique is described by Rizzo et al. with which it is possible to excise 3-8 μm spheres of cell membranes ('blebs') from the soma of cultured mammalian neurons suitable for voltage clamp experiments. The membrane area of the blebs is large enough to make macroscopic membrane current measurements to analyse membrane channels which are not

possible using the whole-cell configuration. The theme of ion channels continues in the papers of Caratsch and Eusebi who discuss the regulation of peripheric synaptic transmission by the C-kinase system, by Arcangeli et al. who discuss ion channels in cancer cells, and by Garay et al. who investigate the role of ion transport in the initiation of atherosclerosis. There is a well referenced review on phosphoinositide signalling by Parker.

Multidrug resistance is represented by a paper by Gottesman and Pastan who discuss the cloning of a gene (MDR1) which encodes for a multidrug transport protein in cells (human KB, a subclone of HeLa cells) resistant to either doxorubicin, colchicine or vinblastine. Circumstantial evidence implicating a 170,000 molecular-weight glycoprotein (P-glycoprotein) as the multidrug transporter and the possible function of the transporter in normal and cancerous tissue are discussed. A multidrug resistance gene is used by Konig et al. to amplify expression of the T-cell surface glycoprotein CD4 in Chinese hamster ovary cells, the large amounts of glycoprotein produced enabled them to analyse the glycosylation pattern.

There are three papers dealing with aspects of membrane fluidity. Parasassi and Gratton describe the use of two fluorescence probes (the well known DPH (1,6-diphenyl-1,3,5-hexatriene) and the less well known Laurdan (2-dimethylamino-6-lauroyl-naphthalene). The excitation spectrum of Laurdan is sensitive to the phase state of phospholipid so that it is possible to photoselect different populations of Laurdan molecules associated with the gel and liquid crystalline phases and hence

New York: Oxford University Press, 2008. 540 p. ISBN 9780199277704; ISBN 9780199277711. The Oxford Guide to Practical Lexicography (OGPL) is a complete introduction to the job of creating a dictionary. It provides a step-by-step guide to all the tasks involved in the planning, resourcing, and compilation of reference materials for human users. The clue is in the title. It is a book about how to write dictionaries. by E.C. Hulme; IRL; Oxford, 1990; xviii + 224 pages; £19.50. The book, 'Receptor-Effector Coupling, which has recently appeared in the 'Practical Approach' series from IRL Press and has been edited by E.C. Hulme, will be welcomed by both basic research scientists and people interested in using biological mechanisms as targets for developing new anti-cancer drugs. As is typical of the series, it is written as a clear series of practical guides on how to carry out studies on various aspects of receptor function. The first chapter, by Sternweis and Pang, gives a straightforward description of the Receptor-effector coupling by E. C. Hulme, 1990, IRL Press at Oxford University Press edition, in English. 224 pages. This edition doesn't have a description yet. Can you add one? a practical approach. This edition was published in 1990 by IRL Press at Oxford University Press in Oxford [England], . New York. Edition Notes. Includes bibliographical references and index. Series. The Practical approach series. Classifications. Dewey Decimal Class. 599.018. Library of Congress. QP364.7 .R4276 1990. The Physical Object. Pagination. xviii, 224 p. : Number of pages. 224. ID Numbers. Open Library. David Hames was one of the originators of The Practical Approach Series in 1981, when the first volume, Gel Electrophoresis of Proteins, was published by IRL Press. Since then over 185 volumes have been published in the series, with total sales of over 700,000 copies. The series has undergone continuous improvement in response to the requirements of users. Nevertheless, the goals for each book remain unchanged: to provide background information, detailed step-by-step protocols, typical data, hints and tips for success, troubleshooting guides, and key literature references for active researcher