

which make up the rest of this book are grouped, and include sections on synthesis and metabolism of prostaglandins in the placenta and during pregnancy, effects on organogenesis, actions on the central nervous system (this includes a detailed review of the controversial role of prostaglandins in fever by Veale and his colleagues) and effect and use of prostaglandins for the induction of labour.

A large proportion of this book is devoted to research on the effects of prostaglandins on the foetal cardiovascular system and on therapeutic applications

of this knowledge. The latter concerns the use of prostaglandin synthesis inhibitors such as indomethacin for the treatment of patent ductus arteriosus, and of prostaglandins themselves for maintaining ductus potency before surgery in several rare cardiac malformations of the newborn. Although these applications of prostaglandins seem rather esoteric, they suggest physiological roles at parturition for these ubiquitous substances and provide good examples of their potential usefulness.

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Advances in Cyclic Nucleotide Research: Volume 9

Edited by W. J. George and L. J. Ignarro
Raven Press, New York, 1978
831 pages. \$75.40

This latest volume in the *Advances in Cyclic Nucleotide Research* series contains the material presented at the Third International Conference on Cyclic Nucleotides held in New Orleans in 1977. The major part of the book is devoted to the papers presented by invitation at the meeting and this is followed by a smaller section which contains the abstracts of the material presented in the poster sessions. Most of the full-length papers contain sufficient introductory material, methodology and discussion to be of interest both to specialists in the field as well as to those with a more general interest in cyclic nucleotides.

The book is expensive (\$75.40) but this is to some extent offset by the breadth and depth of the information that is contained within its 800 pages. The editors are to be congratulated on the logical way they have arranged the contents. The synthesis of cyclic nucleotides is considered first with sections on adenylate and guanylate cyclase. The adenylate cyclase section contains important information on both the receptor and catalytic activities of adenylate cyclase and their regulation by hormones and calcium. The mode of action of cyclic nucleotides is covered in the

next section with a series of articles on cyclic AMP- and cyclic GMP-dependent protein kinases and phosphatases. This is followed by a section on cyclic nucleotide degradation by phosphodiesterases including articles on the roles of calcium and modulator proteins in regulating phosphodiesterase activity. The remainder of the lecture material is devoted to the ever-expanding field concerned with the roles and mode of action of cyclic nucleotides in regulating cell structure and function. The range of topics covered is impressive and includes muscle and central nervous system function, carbohydrate and protein metabolism, cell growth and division, secretion, vision and platelet function. The logical arrangement of contents helps to ensure that one can easily find material relevant to one's own research interests.

In summary, this volume provides an expensive but useful survey of the current research activities, methodology and insights into the cyclic nucleotides and their roles and modes of action as regulators of cell form and function, and as such it should be read by all those with a serious interest in cyclic nucleotides.

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