

investigators with stimulating suggestions for further research, though as a guide for paediatricians and nutritionists there are many more questions than answers.

A. S. FOSBROOKE

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### **Development Regulation, Aspects of Cell Differentiation**

S. J. COWARD (Editor)

*Academic Press, London and New York, 1973, pp. 266, £9.90*

This book consists of a collection of articles concerned with various aspects of cell differentiation. It is difficult, however, to discern any particular reason why the topics covered have been chosen for publication in the form of a book. There is a certain balance in that two articles are concerned with embryogenesis, three relate to algae or fungi, which may be considered as 'model systems' for development in higher organisms, and the remaining four are concerned with various aspects of cytodifferentiation in specific plant or animal tissues, but the treatment of their chosen topics by the authors is highly individual. The article by Humphreys on 'RNA and protein synthesis during early animal embryogenesis' is largely a critical review of the evidence for changes in the rate of RNA synthesis in sea-urchin embryos and, as such, will be of interest to specialists, as will the similar article by Dure on 'Developmental regulation in cotton seed embryogenesis and germination' which is, however, more of a summary than a critical review. Biochemists will also be interested in the article by Brody on 'Metabolism, cell walls and morphogenesis' which, although it is largely restricted to fungal examples, makes a number of useful points concerning the extent to which present preoccupations with translational and transcriptional controls may be misleading. I doubt, however, whether the two articles on myogenesis, which largely concentrate on the morphological aspects, or the articles on the colonial green algae and cellular slime moulds, both of which largely ignore such biochemical information as is available, will stimulate much biochemical interest. The remaining reviews by Searls of 'Chondrogenesis' and by Key and Vandohoeft of 'Plant hormones and developmental regulation' contain accounts of the biochemical aspects of these processes which are useful and, in the case of Searls's, quite extensive. However, it is difficult to see quite what the editor had in mind when he thought that these reviews reflected the bringing of 'developmental studies to a critical threshold point' and this collection will probably rarely stray out of the libraries of those institutions rich enough to afford it.

J. M. ASHWORTH

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### **Pharmacology of Gastrointestinal Motility and Secretion (Volumes I and II): International Encyclopedia of Pharmacology and Therapeutics, Section 39A**

P. HOLTON (Section Editor)

*Pergamon Press, Oxford, 1973, Volume I, pp. 1-360, Volume II, pp. 361-665, £18.00 for the two volumes*

The pharmacological responses of the various parts of the gastrointestinal tract are clearly and thoroughly presented in the two volumes constituting this section of the now-familiar tomes of the *International Encyclopedia of Pharmacology and Therapeutics*. The Editor in her Preface clearly describes the subject material of this work, its sequence of presentation and its coverage. Each chapter, she claims, is complete in itself and should be regarded as an article in an Encyclopedia. This view is both confirmed and endorsed by the reviewer.

Pharmacologic, Pharmacokinetic, and Pharmacogenomic Aspects of Functional Gastrointestinal Disorders. *Gastroenterology* 2016;150:1319-1331. PHARMACOLOGY. Pharmacologic, Pharmacokinetic, and Pharmacogenomic Aspects of Functional Gastrointestinal Disorders. Michael Camilleri, 1. *Preclinical Pharmacology: Animal Models Validated for Study of Sensation and Motility*. The development of new drugs for the treatment of patients with FGIDs is facilitated by preclinical animal models that must reproduce the pathophysiology of FGIDs as closely as possible. This section reviews the most commonly used animal models of visceral pain and disturbed gastrointestinal motility (Figure 1). *Visceral Pain. Mechanical Stimuli*. Washington, DC 20204 Analysis. *Pharmacology of Gastrointestinal Motility and Secretion, Volumes I and 11*. PAMELA HOLTON, Section Editor. Pergamon Press Ltd., Headington Hill Hall, Oxford, England, 1974. iv + 665 pp. 14 X 22 cm. Price \$54.00 The two volumes represent the continued effort of the International Encyclopedia of Pharmacology and Therapeutics to provide a critical and comprehensive survey of present knowledge in various specific areas. Volume I contains 10 chapters and each chapter represents a complete presentation of a single subject. The subject matter is related to that in: *The Pharmacology of Gastrointestinal Motility and Secretion*. International Encyclopedia of Pharmacology and Therapeutics. Holton, P. (ed.), Sect. 39 a. Oxford: Pergamon Press 1973 Google Scholar. Cite this chapter as: Burnstock G., Wong H. (1981) Systemic Pharmacology of Adrenergic Agonists and Antagonists: Effects on the Digestive System. In: Szekeres L. (eds) *Adrenergic Activators and Inhibitors. Handbook of Experimental Pharmacology (Continuation of Handbuch der experimentellen Pharmakologie)*, vol 54 / 2. Springer, Berlin, Heidelberg.