A Welcome Envoy

Biochemical Messengers: Hormones, Neurotransmitters and Growth Factors

By D.G. Hardie. New York, Chapman and Hall, 1991, 311 pages, $35.00 (paper) and $75.00 (cloth) (USA), $43.95 and $93.95 (Canada), ISBN 0-412-30350-7.

As stated on the back cover, Biochemical Messengers is "not intended to be a comprehensive text in the physiological roles of all first messengers; the book provides a cohesive overview, employing unifying principles and molecular mechanisms." This the author accomplishes admirably well. Because I taught mechanisms of hormone action for many years in a medical school, I agree with Hardie's assessment of a need for a volume devoted to biological messengers. The book's clever dissection of the message systems is a useful adjunct for teaching the topic to many levels of students.

I was struck by the elegant, simple, and clear illustrations that clarified important and complex concepts. Particularly effective is the use of bold fonts for key words. Summaries at the end of each chapter help to cement the concepts in the readers' minds. The organization of the chapters provides a refreshing and novel framework for both the teacher and the student. For example, I was impressed by the clarity of chapter 6 ("Nuclear Receptors"). However, I was at the same time disappointed by the omission of heat-shock proteins and steroid-receptor-associated proteins, resulting in a truncated view of the mechanism(s) of steroid action. The omission may limit the long-term utility of the text.

In summary, Biochemical Messengers is an extremely well thought-out and well written ancillary text. The information is mostly up to date, with references to many important reviews. Because of its readability, the book will serve both as an additional reference for biomedical science students and for undergraduate and graduate medical students. Even health professionals will find the book useful in interpreting contemporary literature in endocrinology. It is highly recommended.

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Global Reproductive Endocrinology and the Ovarian Galaxy

Reproduction, Growth and Development


Signaling Mechanisms and Gene Expression in the Ovary


Reproduction, Growth and Development is an anthology of papers presented at a 1990 symposium held in Acapulco, Mexico. The editors claim in the preface that "the expected cross-fertilization in a multidisciplinary event . . . is reflected in the chapters contained in the volume. The interested reader from many disciplines should find novel and exciting information, both from basic and clinical perspectives." The volume does contain several comprehensive articles of interest to reproductive endocrinologists. However, it delivers far less than the editors claim. Ranging in length from 4 to 15 pages, a total of 43 articles cover a broad spectrum of topics. The first few papers cover gonadal morphogenesis, male phenotypic development, differentiation and function of trophoblast, regulation of fetal adrenal growth, circadian rhythms and delivery, and regulation of pubertal onset and growth. Then follow papers dealing with the use of GnRH analogues and GRF(1-29)NH2 as diagnostic and therapeutic tools in development and growth. A group of papers focuses on the cell biology of testes, role of growth factors in testicular function, and human sexual behavior. Then comes a collection of papers devoted to various aspects of the GnRH-gonadotropin axis. Evaluation and treatment modalities for infertile couples as well as some future directives in contraceptive development are also discussed. The final papers deal with neuroendocrine regulation of PRL secretion and its role in reproduction and fertility.

The book draws its strength from the reputation of its contributors and editors. Some papers are presented in manuscript form and focus on limited areas; others are excellent comprehensive reviews of topical concepts. Of particular interest are a group of papers that start with the GnRH pulse generator (actually a reprint of E. Knobil's article from Control of Puberty III, ed. H.A. Delemarre-van de Waal et al., Elsevier Science Publishers) and focus on the GnRH-
Maladaptation and Fertility

Stress and Reproduction


This book contains a collection of papers presented at a conference on stress and reproduction held at Palm Cove, Australia, in 1991. There are 30 chapters by contributors from laboratories and medical institutes in Australia, France, Italy, Japan, Spain, the United Kingdom, and the United States. The articles include technical papers as well as transcripts of more general lectures. As mentioned in the preface, the goal of the conference was to bring together investigators and interested students to discuss current developments in the field of reproductive endocrinology.

The book covers molecular and biochemical advances in reproductive endocrinology and differentiation until 1990 and would be useful to anyone working in the reproductive endocrine area. The contributors are international experts in the field. Though not designed as a text, the invited articles are organized logically and integrated meaningfully.

Except for some papers in manuscript form, the invited articles generally provide a comprehensive review of the topic they address. Of special mention are the excellent reviews on the endocrine, paracrine, and autocrine regulators of the macaque corpus luteum by Richard Stouffer, regulation and role of oxy steroids by Jerome Strauss, hormonal regulation of gonadotropin gene expression by Larry Jameson, and the structure of the gonadotropin receptors by Deborah Segaloff. The submitted manuscripts, on the other hand, highlight the various aspects of ovarian research, but not in sufficient depth. Since many of these papers will eventually appear as articles, this section could have been condensed, lowering the price as a result.

Two other Ovarian Workshops have been held since 1990 and may eclipse the Mayville workshop. Nevertheless, Signaling Mechanisms and Gene Expression in the Ovary will be of immense use to anyone who is working in the reproductive area and wishes to keep up with the current advances in molecular and cellular aspects of ovarian biology.

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