

The following chapters are included:

- the chemistry of lipids;
- inherited defects of lipid metabolism;
- epidemiology of blood lipids and atherosclerosis;
- complications of hyperlipidaemia in the eye;
- complications of hyperlipidaemia at the arterial wall;
- secondary hyperlipidaemias;
- therapy;
- intervention trials;
- the lipid clinic.

This book would be useful for biologists, molecular biologists, and endocrinologists, as well as for advanced students.

The Physiology of Reproduction, Volumes 1 and 2 (2-volume set), Second Edition. Editors-in-chief: E. Knobil and J. D. Neill, Associate Editors: G. S. Greenwald, C. L. Markert and D. W. Pfaff. Published December 1993, Raven Press, New York. Price: US\$454.00. No. of pages: 2750. ISBN: 0-7817-0086-8.

The revised, updated second edition of this classic work is a masterful distillation of breakthrough research on mammalian reproductive physiology. Among its nearly 100 contributors are many of the investigators directly responsible for the field's spectacular progress in recent years. Topics throughout the second edition have been added, condensed, expanded, or completely revamped to reflect new findings on reproductive physiology, endocrinology, and reproductive behaviour.

The 6 years that have elapsed between the first and second editions have seen dramatic and often unanticipated developments in some aspects of reproductive biology, with only little new understanding in others. But, as expected, the quantity and difficulty of the questions raised has increased manifold. We remain markedly ill-informed of the complex control systems that govern reproductive processes and surprised by the striking species differences in the accomplishment of common, fundamental reproductive tasks. The control of ovulation, the advent of puberty, and the initiation of parturition are but three cases in point.

The second edition provides extensive coverage of new research techniques and instruments; recent studies of interactions between hormones and genes; new findings on the structure of receptors; and newly identified endocrine and paracrine substances such as endothelins, interleukins, activins, inhibins, and prorenin. Included are accounts of the latest attempts to elucidate the neural mechanism underlying pulsatile secretion and identify the elusive pulse generator in the central nervous system. Close attention is also given to clinical advances, especially in manipulation of male and female reproductive systems to enhance or inhibit fertility. The main sections included are: *Volume 1*: the gametes, fertilization and early embryogenesis; the reproductive systems; the male; the pituitary and the hypothalamus; *Volume 2*: reproduction behavior and its control; reproductive processes and their control.

This two-volume set would be very useful for those working in the fields of physiology, reproduction, endocrinology, paediatrics, biochemistry, and biology, as well as being a very good textbook for advanced students.

Major Advances in Human Female Reproduction. Edited by E. Y. Adashi and S. Mancuso. Sero Symposia Publications from Raven Press, Volume 73. Published August 1991, Raven Press, New York. Price at publication: US\$122.50. No. of pages: 426. ISBN: 0-88167-652-7.

Research in the field of human reproduction is a rapidly expanding branch of modern biology and medicine. Starting from classical concepts of endocrinology, the regulation of the mechanisms involved in the control of female reproductive function have been extensively investigated but they still remain incompletely understood. Developments in molecular and cellular biology, as well as major technological advances have led, however, to a better understanding of these processes and to a more timely application in the clinical practice of new concepts derived from basic studies, thus the linkage between basic and clinical events has become closer. This volume represents the *Proceedings of the International Symposium on Major Advances in Female Reproduction* held in Rome, Italy, in May 1990 and includes the following topics: puberty (pubertal development, neuroendocrine and paracrine events, external-related factors, pathophysiological aspects and clinical management), the follicular function (endocrine and paracrine regulation, inhibitors and stimulators), the corpus luteum (pulsatile secretion of hormones, factors modulating synthesis or function), achievements in neuroendocrinology, and female hyper-androgenism (pathophysiological events involved, and clinical management from a multidisciplinary approach).

This book would be useful for those working in the fields of gynecology, reproduction, endocrinology, biology and clinics, as well as for advanced students.

The New Biology of Steroid Hormones. Edited by R. B. Hochberg and F. Naftolin. Sero Symposia Publications from Raven Press, Volume 74. Published July 1991, Raven Press, New York. Price at publication: US\$131.50. No. of pages: 376. ISBN: 0-88167-653-5.

This volume contains the proceedings of a Sero Foundation Symposium held in Budapest, Hungary, in 1990.

In 1957, Elwood Jensen synthesized carrier free 6,7-³H-labelled estradiol, which allowed him to demonstrate that estradiol was concentrated in estrogen sensitive tissues against a blood gradient. This important discovery permitted experiments that shed light on the mechanism by which steroid hormones acted and thus the estrogen receptor was discovered. Later studies with other ³H-steroids uncovered a common mechanism involving what is now known as the steroid/thyroid/vitamin receptor superfamily, and the role of steroid receptors in the activation of genomic transcription has been the subject of many recent meetings and publications. This volume presents extensive studies of newly discovered mechanisms of steroid hormone action that modulate the effects of these hormones independently of, or in addition to, classical steroid hormone receptor mechanisms. A major focus of the book is the ways in which the metabolism of the steroid molecule can modulate the hormonal signal. Important studies describe the metabolic pathways that transform steroid hormones into carcinogens and the effects

of diet on estrogenic potential and cancer. The topics covered include the analysis of the gene encoding human aromatase cytochrome *P*-450, oxysterol regulators of cellular cholesterol dynamics, steroid esterification and hormone action, estrogen actions on target cells with evidence for different effects by products of two alternative pathways of estradiol metabolism, the function of steroid binding proteins, the role of growth factors in estrogen action, the intraovarian action of estrogens, the cell-to-cell interactions involved in estrogen action, and the actions of steroids in the brain.

This book would be useful for those working in the fields of biology, biophysics and the biology of reproduction, as well as for advanced students.

Horizons in Endocrinology, Vol. II. Edited by M. Maggi and V. Geenen. Serono Symposia Publications from Raven Press, Volume 76. Published December 1991, Raven Press, New York. Price at publication: US\$132.50. No. of pages: 380. ISBN: 0-88167-655-1.

This volume represents the *Proceedings of the Second International Meeting of Endocrinology Under 35*, held in Sienna, Italy, in 1990. A sequel to a highly successful work first published in 1988, it presents a global view of the latest breakthroughs in basic and clinical endocrinology. More than 40 of the world's most innovative investigators describe the research techniques they have developed, discuss the results of their studies, and highlight the clinical implications of their findings.

Clinical endocrinology has greatly characterized the pathologies derived from the molecular defects in the long distant cell-to-cell signaling at the level of the 'signals' (syndromes of hormonal insufficiency or overproduction), or at the level of the 'receptors' (syndromes of hormonal resistance). Pathological entities derived from disturbances in the paracrine signaling are still largely undefined, but analogically addressed the questions of the 'signals' (congenital absence or, contrarily, overexpression and excessive secretion in paraneoplastic syndromes) and the questions of the 'receptors' (mutation, absence or overexpression influencing the development of proliferative disorders). In the very near future, our better understanding of the molecular mechanisms underlying "self"-peptide presentation and the subsequent "self"-tolerance induction should also lead to a new fruitful regard on the physiopathology as well as the treatment of auto-immune disorders.

The main topics covered are: DNA recombinant technique in the diagnosis of endocrine diseases, prenatal endocrinology, immunoendocrine control of cell growth and differentiation, membrane receptors, hormonal regulation of cardiovascular functions, hormonal agonists and antagonists in clinical endocrinology. This book would be useful for those working in the fields of biology, biophysics, and the biology of reproduction, as well as for advanced students.

Plasminogen Activators: From Cloning to Therapy. Edited by R. Abbate, T. Barni and A. Tsafirri. Serono Symposia Publications from Raven Press, Volume 77. Published October 1991, Raven Press, New York. Price at publication: US\$75.00. No. of pages: 216. ISBN: 0-88167-656-X.

Plasminogen activator is a specific enzyme transforming plasminogen into plasmin. Plasminogen activators are widely distributed in tissues and can, therefore, modulate a multitude of biological activities. In addition to its widely known activity related to thrombolysis and haemostasis, plasminogen activator is involved in human and animal reproduction and embryology, inflammation, tissue remodelling, dermatology and oncology. All these topics are reviewed in this book by an international group of experts actively working in this field. Particular attention has been paid to the structure and characterization of the two types of plasminogen activator and to the function of the urokinase receptor. Two chapters are dedicated to the implications of plasminogen activator both in normal and pathological skin. In the field of oncology, the relationship between plasminogen activator and breast cancer and between plasminogen activator and leukemia are discussed in depth. An entire section of the book reviews the hormonal regulation of plasminogen activator gene expression and the complex relationship between plasminogen activator and the reproductive process. Three chapters focus on both the current understanding of fibrinolysis mechanisms and the clinical application of recombinant tissue-type plasminogen activator in cardiology. The structure and function of plasminogen activator is also covered.

The book is divided into the following main sections: cloning, molecular forms and receptors; endocrine systems and embryology; dermatology and inflammation; fibrinolysis; and oncology.

This book would be useful for those working in the fields of biology, oncology, cardiology, dermatology, endocrinology, and reproduction, as well as for advanced students.

Gonadal Development and Function. Edited by S. G. Hillier. Serono Symposia Publications from Raven Press, Volume 94. Published March 1993, Raven Press, New York. Price at publication: US\$145.00. No. of pages: 331. ISBN: 0-88167-906-2.

This volume contains the *Proceedings of the IXth Workshop on the Development and Function of Reproductive Organs*, held in Peebles, Scotland in May 1992. It reviews different topics dealt with in the sessions of the meeting: recent progress in basic research on gonadal physiology with particular relevance to reproductive medicine, the cellular and molecular processes involved in human reproduction, and the applications of this research in the management of male and female infertility. The different chapters afford a tantalising glimpse of the complex and diverse cellular and molecular processes upon which human reproduction depends. Major areas covered include: gonadal differentiation; sperm and oocyte biology; control of testicular and ovarian function; transgenic manipulation of reproduction, and assisted reproduction in men and women.

This book would be useful for those working in the fields of biology, biophysics, and the biology of reproduction, as well as for advanced students.