The Endocrine Function of the Human Ovary

Edited by V. H. T. James, M. Serio and C. Giusti
Academic Press; London, 1976
ix + 519 pages. £ 11.50

This substantial volume contains thirty-nine papers, proceedings of a course organized by the School of Postgraduate Endocrinology in Florence. As with two previous companion books on 'The Endocrine Functions of the Human Testis' there is a heavy emphasis on clinical disorders but, to be fair, there is a great deal on more basic mechanisms.

The outstanding feature of the book is the breadth of topics covered. All the essentials and many of the fashionable topics are here — steroidogenesis, control of gonadotrophin secretion, cyclic AMP, mechanisms of hormone action, receptors, prostaglandins — plus a number of less worked but highly interesting subjects, such as the role of blood flow in regulating ovarian function. Clinical contributions cover puberty, hypogonadism, the menopause, amenorrhoea, anorexia nervosa, polycystic ovaries, virilization and hirsutism. The overall standard of presentation is high, with clear writing, good illustrations and original data. Most authors have supplied detailed reference lists and there is an excellent index. For a book of this size there are commendably few of those skeletal contributions, frequent in proceedings, which are only written to justify a claim for travel expenses.

Usefulness of the book would have been greatly enhanced if a few authors had been asked to review the broad areas of ovarian endocrine functions and to put recent advances and unsolved problems in some kind of perspective, or at least to have provided a summing-up of the proceedings. This is not a book from which the relative novice can easily obtain an overview. However, the book is of unquestionable interest and value to physiologists, biochemists and clinicians with an interest in reproductive biology and will provide a handy reference source for a wide range of aspects.

J. A. Edwardson

Properties of Purified Cholinergic and Adrenergic Receptors

Proc. 9th FEBS Meet. Budapest, 1974, Volume 37
Edited by M. Wollemann
North-Holland/American Elsevier; Amsterdam, 1975
viii + 148 pages. $ 12.50, Dfl. 32.00

This is one of seven volumes containing the invited lectures at the Ninth FEBS Meeting in Budapest, August 1974. The first half of the volume contains two papers on the properties of purified nicotinic acetylcholine receptor protein (AchR) and one dealing with electronmicroscopy of AchR-containing membrane preparations. There are five papers largely concerned with the relationship of β-adrenergic receptors (β-AdR) to adenyl cyclase.

The contents of the Symposium successfully brought into contrast the relative progress made in research on the biochemistry of AchR and β-AdR. With some developments, the position remains broadly unchanged at the present. The lack of specific
irreversible labels had delayed the isolation and purification of AdR, although some further progress has been made more recently (Lefkowitz, 1976, Biochim. Biophys Acta 247, 1–41). Greater progress had been made, however, in clarifying events following the combination of catecholamine with β-AdR. This was well demonstrated by accounts of the stimulation of adenyl cyclase by catecholamines, the role of membrane phospholipids and guanyl nucleotides (papers by Lefkowitz, by Wolfmann and by Will-Shahab et al.) and by accounts of the actions of thyroid hormone and thyroid stimulating hormone on cardiac microsome and thyroid plasma membrane preparations (papers by Will-Shahab et al. and by Marshall et al.).

In contrast the purification of AchR had progressed to the stage at which investigations of the amino acid composition, subunit structure, carbohydrate content, immunological properties and interactions with cholinergic ligands were informative (papers by Heilbronn et al. and by Raftery et al.). However, information about the mechanisms underlying membrane events following the combination of acetylcholine with the receptor, was minimal. An account of the reconstitution of chemically excitable vesicles from purified AchR and native phospholipids (paper by Raftery et al.) illustrated a recent, promising approach. Since the Symposium, further accounts of this kind, some cautionary, have indeed appeared.

Although interesting and, in the main, well produced, this volume shares the difficulty common to most published accounts of specialised symposia, particularly on rapidly developing subjects. Of necessity, they represent limited samplings of current research in the specified areas, the greater part of which has usually reached the scientific literature before the symposia are published. It may be thought, therefore, that books of this kind are not comprehensive enough for the student, while they contain material already familiar to the specialist. Several books and reviews have appeared in the past 2–3 years, containing articles by other contributors to the area of research covered by this particular volume. Work on AchR has been particularly well represented.

A. K. Prince

Mass Spectrometry of Steroids

by Z. V. Zaretskii
John Wiley and Sons; New York, Toronto, Israel University Press; Jerusalem, 1976
xi + 182 pages. £ 9.90, $ 19.80

First reports of the application of mass spectrometry to the structural elucidation of steroids were made in the mid-1950s and since that time these compounds have been extensively investigated. The present book sets out to summarize and review electron impact induced reactions of the principal steroid structures. The six chapters include steroid hydrocarbons, ketones, alcohols and olefins together with bile acids and oestrogens. Covering a range of steroid structures in a short book (182 pages) has necessitated brief discussion of the spectra of individual compounds and limited the treatment to selecting the most characteristic fragmentations induced by particular functional elements. The author has succeeded in presenting this data succinctly and in a style which is easily read. Figures and fragmentation schemes are well laid out.

The obvious importance of stereochemistry in steroid molecules and the need to differentiate configurational isomers is reflected in the emphasis placed on the effect of stereochemistry on fragmentation and rearrangement processes in the chapters on ketones, alcohols and oestrogens. The authors has also drawn together data on the relationship of ion
The ovary is a complex organ that combines both gametogenic and endocrine functions. It is likely that its hormonal activities facilitated the evolution of separate sexes in reproduction (dioecism) and the specialized behavioral and metabolic needs of internal fertilization, egg processing, and viviparity. In considering ovarian endocrine function, it is apparent that its hormones are not vital for the life of the individual but are absolutely essential for the continuity of animal life from one generation to the next. Keywords. Granulosa Cell Follicle Stimulate Hormone Corpus Luteum Fol Nomenclature Of The Proposed Course The name of degree programme shall be MD Endocrinology. This name is well recognized and established for the last many decades worldwide. Course Title: MD Endocrinology. Training Centers Departments of Internal Medicine with special interest in Endocrinology (accredited by UHS) in affiliated institutes of University of Health Sciences Lahore. Duration of Course The duration of MD Endocrinology course shall be five (5) years with structured training in a recognized department under the guidance of an approved supervisor. The ovary is the gonadal organ (primary sexual organ) in females. Find out the structure, development, various functions, location and anatomy of the ovaries. Ovaries contain the developing follicles which produce human egg cells (ova/oocytes) in a cyclic manner, and are also responsible for the secretion of some important hormones such as estrogen and progesterone that maintain the endocrine function related to the reproductive system in females. Picture 1: Location of the ovaries in relation to other organs of the female reproductive system. Structure of the Ovary. Contents. Structure of the Ovary. Development of the Ovary. Function. Clinical significance. To understand the anatomy and functioning of the endocrine system To describe endocrine diseases that could be linked to the environment To present current knowledge of endocrine disrupting chemicals. Although the endocrine glands are the body's main hormone producers, some non-endocrine organs such as the brain, heart, lungs, kidneys, liver, thymus, pancreas, skin, and placenta also produce and release hormones. Endocrine disorders and children. Endocrine-disrupting chemicals (EDCs) are compounds that mimic or interfere with the normal actions of all endocrine hormones. Some EDCs are lipophilic, resistant to metabolism, and/or able to bioconcentrate up the food chain. stromal and hematopoietic cells. Endocrine function of the thymus. Thymic involution. Spleen: sources of development, microscopic structure and functions. Structure of secretory portions and excretory ducts. Endocrine function of the salivary glands. Age-related changes. Parotid gland: functions, sources of development, the microscopic structure of secretory portions and excretory ducts. Submandibular and sublingual salivary glands: functions, sources of development, the microscopic structure of the secretory portions and excretory ducts. Tooth development: the formation and differentiation of tooth germ. Microscopic structure of the ovary and uterus. Hormonal regulation of cyclical changes in the ovary and uterus. Histology slide list.