

BOOK REVIEWS

Structure and Function of Nucleic Acids and Proteins. Edited by F. Y.-H. WU and C.-W. WU. Published 1990 by Raven Press, New York. No. of pages: 352. ISBN: 0-88167-678-0. Price at Dec. 1990: \$102.00.

This book contains the proceedings of an international symposium held at the Institute of Biomedical Sciences, Taiwan, Republic of China, in 1989 and covers recent advances in basic and clinical research in the very important field of nucleic acids and proteins.

The chapters are included under the following main topics:

- Structure of nucleic acids and proteins.
- Nucleic acids and protein interactions.
- Transcriptional regulatory mechanisms.
- DNA replication and viral gene expression.
- Gene expression in various systems.

Advanced techniques and methodologies, such as X-ray crystallography and two-dimensional NMR spectroscopy, have played a major role in structural studies, and progress in chemical and biochemical synthesis as well as recombinant DNA technology have been instrumental in providing the necessary material for high-resolution studies of nucleic acids and proteins.

This volume would be very useful for biochemists, biophysicists, molecular biologists, physiologists, virologists and geneticists, as well as for advanced students in this field.

Advances in Second Messenger and Phosphoprotein Research, Vol. 23. Edited by P. GREENGARD and G. A. ROBISON. Published 1990 by Raven Press, New York. No. of pages: 300. ISBN: 0-88167-687-X. Price at Jan. 1991: \$131.50.

This volume contains invited reviews by leading authorities on basic aspects and physiological applications of signal transduction research. It includes an in-depth study of protein phosphatases and detailed analyses of the structure, function, and regulation of two multipotential serine protein kinases, casein kinase I and II. A review of signalling mechanisms in micro-organisms: common themes in the evolution of signal transduction pathways, reflects the increasingly sophisticated understanding of how cell regulatory mechanisms have evolved in lower organisms. Other contributors present recent findings on transmembrane signal transduction pathways in *Dictyostellium* and examine the regulation of ciliary motility in *Paramecium* by calcium and cyclic nucleotides.

The timely information presented in this volume is of vital interest to pharmacologists, cell biologists, endocrinologists, biochemistry, physiologists, as well as advanced students in this field.

Endocrine Hypertension. Comprehensive Endocrinology series. Edited by E. G. BIGLIERI; associate editor: J. C. MELBY. Published 1990 by Raven Press, New York. No. of pages: 298. ISBN: 0-88167-587-3. Price at Dec. 1990: \$119.00.

Endocrine hypertension is, with certain notable exceptions, adrenal hypertension. The pathophysiology of arterial hypertension associated with hyperparathyroidism and acromegaly is not sufficiently understood to be included in this volume. Endocrine hypertension is a relatively new discipline that did not exist as an organized body of knowledge until the 1950s. Prior to that time, the original descriptions of pheochromocytoma in 1927 and Cushing's syndrome in 1932 constituted endocrine hypertension, although it was known that deoxycorticosterone (DOC) could produce high blood pressure. The "single hormone" hypothesis that one hormone secreted by the adrenal cortex had both mineralocorticoid and glucocorticoid activity was rapidly dismissed by the discovery of aldosterone by James and Sylvia Tait in the mid-fifties. It is fitting that the first chapter of this volume is written by Professor and Mrs Tait and provides us with fascinating detail of the scientific circumstances which led to their landmark discovery. Within a year of the Tait's pioneering works, Jerome Conn described primary aldosteronism. About the same time, the hypertensive form of congenital adrenal hyperplasia was recognized; the 11β -hydroxylase deficiency type. Originally, the cause of the hypertension was not clear. However, within several years, DOC was established as the hypertensive mineralocorticoid.

The following chapters are contained in this book under three main topics:

- A decade (and even more) of aldosterone and other adrenal steroids.
- Rat models of experimental hypertension: their adrenocortical components.

The Adrenocortical Zona Glomerulosa Hormones

- Primary aldosteronism.
- Dexamethasone-suppressible hyperaldosteronism.

The Adrenocortical Zona Fasciculata Hormones.

- Cushing's syndrome: diagnostic evaluation.
- Hypertension of Cushing's syndrome.
- 17α -Hydroxylase deficiency: implications on steroidogenesis.
- 11β -Hydroxylation deficiency.
- The hypertension of apparent mineralocorticoid excess (AME) syndrome.