

of the central nervous system, including neurotensin and hypothalamic releasing factors, have now been identified in both nervous and secretory cells of the gastrointestinal tract and its accessory organs, and in other tissues. The distinction between nerve cells and non-nervous secretory cells is, to a large extent, arbitrary, since all nerve cells are neurosecretory and elaborate chemical mediators that act locally and/or at a distance.

Some of the contributions in the present volume have been presented in identical or similar form in previous publications. This book is clearly not one that can be read by the non-specialist. However, it is the editorial aim "to illuminate a significant area of neuroscientific endeavor by reviewing the principle strategies that have evolved in observations on peptides which have thus far received the most extensive, multidisciplinary study". On this basis, it is noteworthy that there is scant coverage of storage, secretion and neuronal actions of the endorphin peptides; however, this apparent neglect may have been intentional because of the extensive treatment this family of peptides has received in numerous symposia, monographs and reviews.

For the non-specialist striving for an introduction to peptide neurobiology, the individual contributions represent summaries of research in the forefront by acknowledged leaders in their respected fields. In addition, several chapters are in the nature of reviews of specific peptides and include new and original insights into the physiological roles of these putative transmitters. For those more versed in some area of neurobiology, this collection of papers presents an up-to-date description of current knowledge and approaches to the study of the physiology, pharmacology and pathology of specific neuropeptides. Literally, every facet of neuropeptide research is covered:

microscopical localization, brain distribution, biosynthesis, storage, release and degradation, electrophysiological effects, receptor types and distribution, and behavioral and other effects including those in man.

A book on neuropeptides of more value to the non-specialist should probably include consideration of neural and non neural actions of a given peptide in the economy of the body, the multiplicity of biological messages contained within the amino acid sequence of a single peptide, the multiplicity of actions exerted by each of the known neuropeptides, the complexities of peptide neurotransmission derived from co-storage and co-secretion of multiple peptides or of peptides plus amines in the same neuron, and consideration of the criteria that designate a brain peptide as a viable candidate as neurotransmitter. Some of these aspects are competently and thoroughly treated for specific peptides in individual chapters.

Although this book is valuable in its own right, I look forward to a treatment of the neuropeptide field, eventually, which goes beyond the cataloguing of new effects of old peptides and of standard pharmacological tests applied to new peptides. There appear to be few, if any, central circuits that are not influenced by each of the known neuropeptides. Perhaps it is time for assessment of known neuropeptides for common threads in their storage, secretion and actions that may provide a basis for new hypotheses that can create order out of apparent chaos. Such a reappraisal may have the salutary effect of directing future research to solution of fundamental problems of multiple peptide transmitters with overlapping structures, targets, specificities and effects.

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## Books Received

Annual Research Reviews: Endocrinology RENIN - Volume 5. By Suzanne Oparil, Richard E. Katholi, Sherry R. Winternitz. Published by Eden Press, 245 Victoria Avenue #10, Westmount, PQ H3Z 2M6. January 1981. 368 pages. \$38.00 Canadian Funds.

THE FACIAL PALSIES - Their Physiopathology and Therapeutic Approaches. By Joseph Moldaver and John Conley. Published by Charles C. Thomas, Springfield Illinois. 1980. 258 pages.

Progress in Pharmacology - Volume 3, Number 2. ACTION OF DRUGS ON THE CEREBELLAR ELECTRICAL ACTIVITIES. By G. Gogolak and Ch. Stumpf. CYCLIC NUCLEOTIDES AND THE NERVOUS SYSTEM. By V.V. Myllyla, E.R. Heikkinen, E. Hokkanen, H. Vapaatalo. Published by Gustav Fischer Verlag, Stuttgart-New York. 1980. 106 pages. \$42.50 U.S. funds.

THEORETICAL APPROACHES IN NEUROBIOLOGY. Based on a Work Session of the Neurosciences Research Program. Edited by Werner E. Reichardt and Tomaso Poggio. Published by MIT Press, Cambridge-Mass. 1980. 252 pages. \$20.00 U.S. funds.

THE BORDERLAND OF EPILEPSY - A Reappraisal. By Mogens Dam and Jill Gordon Klee. Published by Scriptor Publisher ApS, Copenhagen, Denmark. 1980. 104 pages.

EEG PRIMER. By R. Spehlmann. Published by Elsevier/North-Holland and Biomedical Press - Amsterdam, New York, Oxford. 1981. 473 pages.