**Book Reviews**

P. Illes, C. Farsang (eds)
Regulatory Roles of Opioid Peptides

This book represents the proceedings of a meeting on the regulatory roles of opioid peptides held in Budapest in August 1987. It consists of five parts: (1) opioid peptides and their receptors, (2) regulation of neuronal excitability, (3) regulation of transmitter and hormone release, (4) regulation of integrative mechanisms in the central nervous system, and (5) regulation of cardiovascular mechanisms. In a field which has been very rapidly moving for more than 10 years and in which dozens of publications still appear every week, volumes summing up certain aspects are always welcome because they usually serve as excellent reference source. The information contained in the 42 chapters of this book is in part very specialized and addresses itself to the experts in the field. However, since many of the chapters (e.g. by C. Farsang, K. Fuxe, A. Golstein, J. Hughes, P. Illes, W. Zieglgänsberger and their coauthors) combine recent data with excellent introductions and discussions, giving the reader a good survey on the respective topic, the book is also of value for the nonspecialist who finds very useful general information about opioid peptides. Thus, the book can be recommended to research laboratories of endocrinology, neurobiology and physiology.

A.N. Eberle, Basel

Emile M. Scarpelli, Ermelando V. Cosmi (eds) Reviews in Perinatal Medicine, vol. 6

Once again the editors have managed to choose subjects of high clinical actuality. All articles are easy to read. The first topic, echo-cardiography in the diagnosis of fetal malformations, gives a concise overview for the non-specialist and covers all relevant issues although in some parts the reader might miss a more thorough discussion of the problems of diagnosis and therapy.

The second review on chorion villous biopsy again collects relevant data from the literature. Technical details are presented as well as present possibilities to obtain prenatal diagnosis using this procedure.

The critical interpretation of possible risks is very valuable. Peters and Buchan present an excellent article on blood viscosity in perinatology, reviewing the theoretical backgrounds of rheology as well as clinical implications for the pregnant woman, the fetus and the newborn. All relevant literature is cited.

Due to the almost unlimited field, the article on drugs in pregnancy and fetal abnormalities can only summarize the most relevant data. The authors present the problem from the viewpoint of var-
ious common diseases of the pregnant woman and this makes it much more relevant to the reader than just looking at various groups of drugs. This article is very valuable for any clinician treating pregnant women.

The review of early diagnosis and prevention of genetic disease has a more theoretical touch. Still, it gives the interested reader an excellent overview of the present state of the art as well as a sound background for the understanding of future developments.

The article on hypertensive disease in pregnancy again presents relevant data on the pathophysiology of this problem. It is a valuable overview for the non-specialist but unfortunately does not give enough precise guidelines for the management of this very common complication.

The last article on the use of human surfactant for the treatment of idiopathic respiratory distress syndrome not only summarizes the present data on this mode of therapy but also presents a comprehensive overview on the physiology and phytophysiology of surfactant composition and turnover.

Altogether this review book can be highly recommended to obstetricians and pediatricians involved in perinatal medicine. Even the most sophisticated specialist can learn something from these excellent authors.

P.W. Nars, Basel

J.E. Blalock, K.L. Bost Neuroimmunoendocrinology
Progress in Allergy, vol. 43
S. Karger, Basel 1988
X + 166 pp.; SFr. 139.- DM 166.-/US $ 92.75
ISBN 3-8055-4774-9

The 43rd volume of Progress in Allergy is devoted to the relatively new field of neuroimmunoendocrinology, a subject that is attracting increasing attention. It has long been known that gluco-corticoids can modify the immune response and until recently, this was regarded as the main point of interaction between the endocrine and immune systems. However, it is now becoming clear that not only can the immune response elicit changes in the brain as well as in the endocrine and autonomic nervous systems, but also that neuropeptides themselves could be part of the mechanism for the regulation of host defence responses.

In the seven invited chapters of this monograph, the editors, J.E. Blalock and K.L. Bost, have attempted to present an up-to-date review of the recent evidence for communication between the immune and neuroendocrine systems. After a short introduction by the first editor, the two opening chapters are devoted to the production of neuroendocrine peptide hormones by the immune system and an interesting account of the noradrenergic innervation of lymphoid organs. The following chapters cover the topics immunoregulatory properties of neuroendocrine peptide hormones, neuropet-tide receptors on mononuclear leucocytes and lymphokines and cytokines and their hormonal activities. The monograph closes with 272

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an excellent, speculative summary of what is known at present concerning signaling pathways of the neuroendocrine-immune network.

It becomes clear that, although there is considerable evidence for interaction between the two systems in vitro, we are still far from understanding its importance and mechanism of action.
in vivo. For example, in vitro observations suggest a regulatory role for circulating opiates whereas in vivo studies suggest that their action may be centrally mediated. Furthermore, the synthesis and release of anterior pituitary peptides particularly those related to ACTH by human mononuclear cells as claimed by the editors and their coworkers (who incidentally contribute four of the seven chapters of this monograph) could play an important role in immune regulation. However, their results still require confirmation by independent research groups.

B.B. Baumann, Basel
Russel J. Reiter (ed.)
Pineal Research Reviews, vol. 6
Liss, New York 1988
XV+311 pp.; US$ 120.00
ISBN 0-8451-3605-4

Volume 6 of Pineal Research Reviews edited by R.J. Reiter follows a series of 5 previous excellent volumes. One may consider that in the previous 5 volumes the whole field of pineal research would have been covered. Then volume 6 makes the reader feel wrong as new aspects of physiology, neuroendocrinology, and pathophysiology of the pineal gland are very precisely reviewed.

The first chapter describes the pineal gland complex and the cerebrospinal fluid-contracting neurones, and highlights the similarity of these neurones with the pineal photoreceptors. This histologic similarity is analyzed throughout evolution and clearly strengthens the view that the pineal complex is a part of the brain and consists of neural tissue. The following chapter reviews the response of amphibian melanophores to melatonin, in terms of morphology but also of the molecular transduction of melatonin action and of the structure of melatonin agonists and antagonists. Physical and biological considerations on photic environments are explored in the third chapter. Developmental aspects of the pineal neuroregulatory system are described both morphologically and biochemically. These aspects bring to the reader a new comprehensive approach to understanding the basic mechanisms underlying neural and endocrine pineal cell functions.

The last three chapters are more concerned with the physiology of the regulation of melatonin secretion and its possible actions. Light entrainment of melatonin rhythms is analyzed in animal models. It stresses the well-known fact that both the duration and phase of pineal melatonin production are precisely regulated by environmental light acting through the circadian system. The hypothetical mode of action of melatonin is analyzed in chapter 5. This chapter reviews in a very complete fashion what is known on the melatonin uptake and binding to the central nervous system structures, the effects of lesions and implants, as well as the interactions of neurotransmitters, neuropeptides and sex steroids with melatonin. Hypothetical models of melatonin action on gonadal action are proposed. Finally, pineal functions as assessed by the measurement of melatonin in biological fluids in health and diseases of children are reviewed. Several of the findings concerning melatonin concentrations in children raise the question of the use of different radioimmunoassays for melatonin. This makes comparison of results between research groups and conclusions difficult.

Again, one may stress that such reviews as presented in this 6th volume are useful to researchers, whatever their speciality is. All chapters bring a complete list of references and
are written by well-known scientists. This volume should be very useful to all who are interested in pineal function.
Pierre C. Sizonenko, Geneva