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This book is based on the communications which were presented at an international symposium held in January 1971 at Duarte (California). The symposium was organized in order to discuss potential new approaches to the understanding of pulmonary emphysema. These new approaches in turn are based on the observation that inherited antitrypsin deficiency is frequently associated with pulmonary emphysema. At present it is not yet possible to conclude that an imbalance between released proteases and endogenous protease inhibitors could be a main factor in the development of pulmonary emphysema in general, but it could be shown that experimental instillation of various proteases leads to lesions resembling pulmonary emphysema. There are about 50 contributions by more than 80 authors arranged in six sections under the following headings: diseases associated with α1-antitrypsin deficiency; genetics of the Pi system; methods for detecting α1-antitrypsin abnormalities; pathophysiology of emphysema; chemistry of proteases and their inhibitors; experimental emphysema.

The book offers numerous interesting ideas, informations and findings and it elucidates the subject from quite different points of view. It shows, however, as well that still much work is left to be done until the role of proteolytic processes in the development of pulmonary emphysema in general will be clear.

K. Karzel, Bonn


This book, appearing as volume 2 in the series ‘Monographs on Atherosclerosis’, aims at collecting and discussing recent findings on the subject of smooth muscle cells in atherosclerosis. Another aim, however, is to review the ‘old’ literature on this subject in order to show that numerous so-called new discoveries are indeed long known facts which are documented in the old (mainly European) literature. The matter reviewed in this monograph is limited to the morphology of smooth muscle cells in those organs which are affected by atherosclerosis, i.e. large elastic and medium-size muscular arteries. The main chapters of the book deal with the following topics: identification of cells in atherosclerotic lesions; arterial structure and reaction to injury; diffuse intimal thickening; early lesions of atherosclerosis; the fibrous plaque. The text is supplemented by a list of about 300 references and a selection of well-produced micrographs which are arranged as an appendix. The volume is a rich source of information and of references and will be of great value to all those workers who are involved in atherosclerosis research.

K. Karzel, Bonn

This small book contains chapters on chemotherapy of mental diseases, antipsychotic drugs, antidepressants, tranquilizers, and hallucinogens. Many references and formulae are given; there is also a wealth of pictures showing EEGs, pole-climbing rats, changes of both handwriting and painting during drug treatment, psilocybe mushrooms, and even the witchcraft section of Goya’s engravings ‘Caprichos’. This and the glossary shortly explaining terms like, e.g., ‘antitussive’, ‘bradycardia’ or ‘parenterally’, indicates that the book is also thought to be read – and understood – by nonmedical readers. Then, however, eight lines plus an EEG record on drug-induced changes of the (unexplained) recruiting response, or the stereo-chemical drawing of the reserpine molecule without commentary are useless, even if the reader is a pharmacologist. On the other hand, I much enjoyed to learn how a connoisseur like the author has coped with the tremendous amount of knowledge, literature, uncertainty. This very condensed text teaches well the rapid expansion and therapeutic importance of a field of medical science just in the offing only 20 years ago and thus can provide the reader with the consolation and optimism the author himself felt when writing it.

G. Zetler, Lübeck


19 authors have contributed chapters on the actions of dopamine on mental functions, behavior of man and laboratory animals, parkinsonism, impotence, depression, mania and other psychiatric disorders. With regard to the use of L-dopa as an anti-parkinsonian drug, this is a timely book dealing extensively with the mental side-effects of this new treatment. Clinicians and pharmacologists will derive profit from these concise texts which at the same time stimulate further research on dopa and dopamine in mice and men, and damp exuberant expectations, e.g. concerning the usefulness of L-dopa in states of depression or impotence.

G. Zetler, Lübeck


Vitamin B6 is involved in the biosynthesis and metabolism of many vitally important substances and neurotransmitters. Therefore, it is no wonder that this book covers a very wide range of topics: from ontogenetic alterations of vitamin B6 metabolism over amino acid transport and metabolism to turnover of biogenic amines, and, finally, parkinsonism. It was certainly justified to devote an entire volume of this series to vitamin B6 which obviously has been too much neglected by pharmacologists working on the mechanisms of action of centrally acting drugs. I think this book contains enough fascinating findings and views to stimulate the interest of neurobiologists and neuropharmacologists.

G. Zetler, Lübeck

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H.G. Baumgarten: Biogenic Monoamines in the Cyclostome and Lower Vertebrate Brain. Fischer, Stuttgart 1972. VI + 90 pp., 58 fig., 19 tab.; DM 52.-.

The methods used comprise light, fluorescence, and electron microscopy, micro-spectrography, and chemical determinations of dopamine, noradrenaline, adrenaline, and 5-hydroxytryptamine. Objects of investigation were the brains of Lampreta fluviatilis, Spinax niger, Acanthias vulgaris, Carassius auratus, Rana esculenta, Lacerta viridis and L. muralis. The main findings are: (1) four different monoamine-containing neuron systems in the brain and spinal cord of lamprey, and (2)
a shift in central catecholamines from dopamine to noradrenalin during phylogenesis, dopamine being the predominating biogenic amine in the lamprey brain. The figures are excellent, the discussion is extensive and characterized by the abundant use of findings obtained in warm-blooded animals.


This volume contains 19 contributions which were presented at an interdisciplinary symposium held in September 1970 in Buffalo, N.Y. It was the aim of the organizers of the symposium to provide an opportunity for discussing regulation of cellular functions under various points of view. A number of articles deals with various aspects of cellular nucleic acids and nuclear proteins in relation to cell proliferation, including the influence of drugs on these components or their functions. Further contributions are devoted to problems of cell differentiation, to the genetic control of enzyme activity, to some special cellular functions in drug metabolism, to various aspects of viral interference, to cell mediated immune phenomena, and to drug effects on certain functions of cultured cells. Mainly new studies and recently obtained results are reported. Although most of the articles treat highly specialized topics, the volume will be of general interest to cell researchers of various biological and medical disciplines as a source of information and of stimulating ideas.

K. Karzel, Bonn

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This first volume of a new series clearly demonstrates that – as pointed out by the editors in the preface – biochemical neuropsychopharmacology is becoming 'increasingly quantitative and interdisciplinary'. Consequently, the scope of topics is large and also covers methodology: axonal transport between soma and synapse, localization and physiological role of serotonin neurons, protein turnover and synaptic function, storage and secretion of catecholamines, turnover of brain serotonin, gas chromatographic assay of acetylcholine, cyclic 3',5'-AMP in
neurobiology, biosynthesis of brain proteins, immunological methods in neurochemistry, LSD and chromosomal aberrations, CNS active drugs and steroid metabolism in man, and mechanism of action of amphetamine. This highly interesting and timely volume made a great promise which, as we now know, the following volumes have fulfilled so far.

G. Zetler, Lübeck


This booklet, appearing as volume 57 in the series ‘Anaesthesiology and Resuscitation’, contains the proceedings of a symposium which took place in December 1970 in Frankfurt/ Main and which was devoted to the ultra-short acting barbiturate anaesthetic methohexital. It was the aim of the symposium to discuss advantages and disadvantages of this drug, which was introduced into therapy in 1960, in comparison to other frequently used intravenous anaesthetics. There are five contributions on basic pharmacological aspects and 15 further communications on clinical experiences with methohexital. The results obtained so far show that methohexital (among the short-acting intravenous anaesthetics, besides propanidid) possesses the shortest duration of action, while the incidence of serious side-effects is reported to be lower than with other intravenous anaesthetics. On account of these properties the drug is particularly suited for the induction of general anaesthesia and for the use in ambulant patients. The volume contains numerous theoretical and practical informations on methohexital and will be of value to all those physicians who are confronted with problems of anaesthesia.

K. Karzel, Bonn


This book contains the proceedings of a symposium held in October 1970 in Mainz and appears as volume 58 in the series ‘Anaesthesiology and Resuscitation’. The aim of this symposium was to discuss metabolic processes in conditions which require intensive care. The 12 contributions deal with such topics as regulation of appetite, various aspects of protein and amino acid metabolism, lipid metabolism, electrolyte metabolism, with influences of trauma and shock on metabolic processes and with therapeutic possibilities in patients with postoperative or posttraumatic metabolic disorders. The booklet will be a valuable aid to all those clinicians who are involved in the treatment of patients under intensive care.

K. Karzel, Bonn

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At the time being, clinical pharmacology is gaining more and more importance and is developing to an individual medical discipline. This probably was not the main reason for which the editors undertook the compilation, together with 17 further authors, of a textbook of pharmacology in which the clinical consequences that can be drawn from basic pharmacology are stressed. The main aim of the book is rather to enable not only medical students but also clinicians and practising physicians to put their knowledge in basic pharmacology into therapeutic practice with even better success. The editors emphasize that successful therapy requires an integration of pathophysiology of disease and of basic pharmacological facts and that knowledge of both these disciplines is a prerequisite for the use of this book. The book, therefore, does not intend to
replace textbooks of pharmacology and pathophysiology, but can be only regarded to be a supplement to them. According to the mentioned idea the content of the book is subdivided into 4 units. The first of these units deals with basic principles of drug administration which should always be taken into consideration at the beginning of drug therapy. The second and most extensive unit (about 485 pp.) is devoted to pathophysiologic and pharmacologic considerations in drug application. In this part, disorders of various organ systems or origin are treated under physiologic, pathophysiologic and pharmacologic aspects and finally the therapeutic conclusions are discussed with regard to all these aspects. It was not the intention of the authors to give a complete account of all important disorders or of all available drugs, but rather to show the principles of therapy. The third unit of the book is devoted to the recognition and evaluation of therapeutic measures, including such topics as placebo, drug reactions, drug interactions or drug overdosage. The last unit finally demonstrates the application of the discussed principles by means of a few programmed cases in therapeutics. The book can be warmly recommended to medical students and physicians as a valuable source of instruction for the therapeutic application of drugs.

K. Karzel, Bonn


This book contains, besides a short introduction, 12 lectures which were presented by outstanding scientists from the USA and Europe at a symposium held at Mosbach (FRG) in April 1971. Only invited lectures on various aspects of cell membranes with emphasis on the dynamics of the structure were given. There are contributions on the molecular structure of membranes, on the role of membranes in morphogenesis and differentiation, on cell surface antigens, on mitochondrial membranes, viral membranes, bacterial membranes and synthetic membranes, on various aspects of metabolic processes in membranes, on cooperativity in biomembranes and on magnetic resonance studies of membranes. In an extensive round table discussion at the end of the symposium one tried to achieve further elucidation of open problems. The book reviews new developments and points to new trends in the field of membrane research. On account of the great importance of membrane structures in all living organisms, the volume will be of interest to a wide circle of workers in all biological and medical disciplines.

K. Karzel, Bonn

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The ‘Psychiatrie der Gegenwart’, first issued in the sixties and published in three volumes, should, according to the first editors H. W. Gruhle, H. Meyer-Gross et al continue the ‘Handbook of Psychiatry’ by O. Bunke, which was published in the thirties. The second edition begins with ‘Clinical Psychiatry’. According to the increase of knowledge and experience, the ‘Clinical Psychiatry’ is nowadays published in two parts. The editors K.P. Kisker, J. Meyer et al. have again gained internationally known experts for the special subjects.
The second edition of ‘Clinical Psychiatry’ bases also on the traditional classification of the psychic phenomena of the German Psychiatry: symptomatic psychosis, endogenous psychosis, and psychic abnormalities as a variety of character or personal neurotic development. The endogenous psychosis, neurosis and psychopathic personalities, as well as abnormal reaction and psychic disturbance during childhood and youth are discussed in the first part. According to our recent knowledge, the psychodynamic and social aspects in manifestation of endogenous psychosis are discussed in a broader manner. Psychic disturbances based on somatogenic psychosis, organic psychosis, toxomania, epilepsy, oligophrenia and psychiatry of old age are discussed in the second part.

The ‘Clinical Psychiatry’ divided in two parts, takes notice of the new development in basic psychoanalysis, sociology as well as somatogenic research, and it represents the newest standard of clinical investigation. The contributions by H.J. Weitbrecht and M. Bleuler concerning endogenous psychosis as well as the sections by M. Bräutigam and H. Quint dealing with neurosis and psychic abnormalities give a fundamental and complex survey about these subjects, H. Huber and H. Penin give new accents to the research in epilepsy.

The editors of ‘Psychiatrie der Gegenwart’ have always noticed, that this book should not replace a handbook. Nevertheless, this edition, however, is very useful as a book of reference to the psychiatrist doing research as well as doing practical work.

H. Vahar-Matiar, Bonn