Book Reviews

H. Struck (ed.) Experimentelle Medizin
Thieme, Stuttgart 1973
X + 388 pp., 194 fig., 90 tab.; DM 79.-
As the author states, the book is meant to present a guideline on the techniques of experimentation in medicine for beginners. Introductory chapters deal with the design of experiments, with statistics, handling and care of animals, with sterilization and disinfection. Other important topics are the biochemistry of the cell and cell fragments, biological membranes and membrane models, transport mechanisms, and standard techniques used in cardiovascular physiology.
The remainder of the volume provides sections on the techniques of organ perfusion, on immunologic problems of transplantation and an outline of general pharmacology, especially of pharmacokinetics. Tables on biological parameters and related data provide a valuable appendix to this book on the quintessences of experimental medicine.
R. Kullmann, Bonn

S.S. Oja, P. Kontro and P. Lähdesmäki Amino Acids as Inhibitory Neurotransmitters
Three amino acids are reviewed in the third issue of the new series Progress in Pharmacology, namely, GABA, glycine and taurine. The main emphasis is on biochemical aspects such as localization, biosynthesis, degradation, uptake, release, and binding to receptors. The electrical phenomena of the postsynaptic response to the amino acids and their congeners and antagonists are discussed in a more cursory way. It is concluded that a transmitter function is quite likely for glycine and even more so for GABA, but much less certain for taurine.
The paper contains a wealth of information drawn from (approximately) 909 references. The text is carefully prepared, with a minimum of typing errors. It has been written for specialists rather than neophytes in the neurosciences. There are no illustrations. It is sometimes difficult to find one’s way through the partly contradictory data reported from the literature. The authors occasionally sum up a chapter with a few critical words that weigh the pros and cons and make their own standpoint clear. This is a welcome guide that perhaps should have been used more liberally.
Klaus Starke, Freiburg

J. Hirtz (ed.)
The Fate of Drugs in the Organism
Compiled by the ‘Société Française des Sciences et Techniques Pharmaceutiques’ Working Group under the chairmanship of J. Hirtz, this book is a bibliographic survey of all literature references concerning drug absorption, metabolism, distribution and excretion. Extracted from around 70 journals (beginning 1948), each publication was analyzed for certain key words, which are documented in easy-to-read tables in the present book. Covering about 3,000 literature
references, this volume is a simple and cheap, but valuable bibliographic tool for all those studying the fate of drugs in the organism.

D.A. Kalbhen, Bonn
A. Frigerio and E.L. Ghisalberti (eds.) Mass Spectrometry in Drug Metabolism
This book contains 32 of the lectures presented at an ‘International Symposium on Mass Spectrometry in Drug Metabolism’ held in June 1976 at the ‘Mario Negri’ Institute in Milan; more than 150 experts from all continents participated. Accordingly, the contributions cover a wide spectrum of subjects, including not only the qualitative and quantitative analysis of drugs and their metabolites, but also the determination of a number of endogenous compounds. Some of the articles contain a bulk of data not pertinent to the main subject of the book.

Parts of the lectures were centred around two major topics, namely developments in methodology, and application of mass spectrometry to the field of drug abuse and intoxication. In the section on methodology, descriptions of recent advances, for instance quantitation following direct inlet, are supplemented by surveys on certain techniques, for instance chemical ionisation, selected ion monitoring, and the use of computers in gas chromatography-mass spectrometry. These contributions make the book particularly valuable for research workers who wish to get a more general insight into the field. Several of the chapters in the section on drug abuse are devoted to research on cannabinoids including their metabolism and trace analysis in biological fluids from cannabis smokers.

Though a few of the contributions contain figures of poor quality, most of them are well set out, with appropriately designed figures, clear schemes, and good tabular material.

U. Breyer-Pfaff, Tübingen
J.A. Bevan, G. Burnstock, B. Johansson,^ R.A. Maxwell and O.A. Nedergaard (eds.) Vascular Neuroeffector Mechanisms
2nd Int. Symp. on Vascular Neuroeffector Mechanisms, Odense 1975
Karger, Basel 1976
VIII + 260 pp., 68 fig., 20 tab.; SFr./DM 126.-/US $ 48.50
ISBN 3-8055-2325-4
The report of the symposium contains 25 articles divided into 5 sections according to the subjects discussed. Papers dealing with the structure, development and differentiation of vascular tissue are presented in section I. In part II articles handle biochemical and electrophysical aspects of contractile mechanism. Storage, release and disposition of adrenergic neuro-transmitters and their actions via postsynaptic receptors are discussed in chapter HI. The last two sections are devoted to the pathophysiology of blood vessels in vasospasm, hypertension and to the mode of anti-hypertensive and vasodilator drugs. This volume is ended by an article dealing with trends in the treatment of hypertension.

The text will be of interest to all those engaged in
the study of blood vessels, their structure and function. Furthermore, the book should appeal to clinicians and pharmacologists concerned with vascular disorders, particularly hypertension and peripheral spastic disease.

F. Witassek, Bonn

P.R. Saxena and R.P. Forsyth (eds.) Beta-Adrenoceptor Blocking Agents
North-Holland, Amsterdam 1976
XII + 380 pp., with illustrations and tables;
US $ 26.25, Dfl. 68.00
ISBN 0-7204-0660-9

This collection of papers on beta-receptor blocking agents begins with basic lectures on the pharmacology of these drugs, written by authorities in the particular field. The ensuing chapters on pharmacokinetics and clinical application provide a solid basis for a rational use of beta-receptor blocking drugs. There is a full discussion on nonspecific properties, intrinsic activity and cardioselectivity, and their relevance in clinical practise. The last section is devoted to various experimental and clinical studies.

The text is typewritten but nevertheless well readable. The editors are to be congratulated for the well-considered planning and layout of this rapidly printed symposium. On the whole, the book provides an excellent overview for everyone interested in this discipline.

R. Küllmann, Bonn

L. Szekeres and G. Papp (eds.)
Symposium on Drugs and Heart Metabolism
Akadémiai Kiadó, Budapest 1973 369 pp., with illustrations and tables

This text appeared as volume 2 of the papers presented at the first congress of the Hungarian Pharmacological Society. It is divided into two parts. The first part contains several important lectures on cardiac physiology and biochemistry under basic conditions, during ischaemia, and under the influence of drugs.

The second part encompasses a great variety of experimental and clinical studies ranging from the action of various beta-adrenergic blocking agents to the cardiotoxic effects of radioprotective compounds.

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The book suffers somewhat from the marked variance of contributions and the lack of an index.

R. Küllmann, Bonn

S.I. Rapoport
Blood-Brain Barrier in Physiology and Medicine

In the initial chapters the author systematically describes the structure of membranes and cell junctions. This information is used to explain how specific barrier sites – cerebral blood vessels, choroid plexus, and arachnoid membrane – coordinate their function in regulating the ionic environment and metabolism of the central nervous system. Quantitative methods to determine transport characteristics and barrier permeability are critically evaluated.

One chapter is devoted to pathological alterations of the blood-brain barrier by trauma, tumors, heavy metal poisoning, irradiation, anoxia and ischemia. Additional chapters include pH partition hypothesis, neurotoxicity of X-ray contrast agents and antibiotic therapy in the central
nervous system. The transport of monosaccharides and amino acids across the blood brain barrier is discussed extensively as those compounds are the most important substances for brain metabolism. One particular chapter deals with the sites and functions of the blood-aqueous and blood-vitreous barriers of the eye. The present volume is concluded by an extensive reference list and provides an interesting and informative survey of the problems of the blood-brain barrier.

F. Witassek, Bonn

V. Voicu and R. Olinescu Enzymatic Mechanisms in Pharmacodynamics
Abacus Press, Tunbridge Wells 1977
305 pp.; £16.75

This book is the English version of a Romanian textbook published in 1976. The topics of the book cover a wide range: pharmacokinetic aspects; the metabolism of drugs; the cholinergic system; the adrenergic system; pharmacological interrelations of the cyclic AMP system; biochemical mechanisms involved in the action of neuropsychotropic compounds; biochemical mechanisms in radioprotection and radiosensitization; pharmacogenetics, and prostaglandins and their pharmacological effects. However, obviously due to difficulties in translation and probably by simplification several points of the discussion become cloudy and a few are wrong. In addition there are a number of printing errors. Catecholamines appear twice in two different chapters. The chapter ‘Pharmacological interrelations of the cyclic AMP system’ will find interest since a wide range of results in this research area is reviewed.

This book might be of interest for readers in Romania if there is no modern textbook available and since scientific literature is very difficult to obtain. However, there does not seem to be the need for an English translation.

M. Albinus, Tübingen

W.A.M. Duncan and B.J. Leonard (eds.) Clinical Toxicology
Proceedings of the European Society of Toxicology, vol. XVIII
Excerpta Medica, Amsterdam 1977
IX+348 pp.; US $35.75
ISBN 90-219-0333-4

This book contains the proceedings of the meeting of the European Society of Toxicology held in Edinburgh in June 1976. The first part of the book comprises 14 contributions presented at 3 symposia under the following headings: Clinical toxicology (5 papers); Drug analysis – application in toxicology (4); and Metabolism of foreign compounds in lung and inhalational hazards (5). The main topics are self-poisoning, toxicity in relation to blood levels, analytical methods, uptake and metabolism of chemicals by the lung, or toxicology of smoking materials. In two further sections the abstracts of 32 free communications (90 pp.) and of 38 contributions presented at poster sessions (100 pp.) are summarized. The contributions of these sections also deal with clinical as well as with experimental studies, using animals or various in vitro systems as test models. The book offers a cross section through present research activities in toxicology and will be of interest for experimental workers as well as for clinicians.

K. Karzel, Bonn