

## Book Reviews

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R. M. LOVE: **The chemical biology of fishes**. Academic Press, London 1970. XVI + 547 pp.; 103 fig. £7.00.

This book tries to establish a biology of fishes on account of the chemical composition of fish organisms. The first chapter is devoted to technical problems, particularly to the dependence of analytical results upon morphological and functional factors. The four following chapters deal with the chemistry of fishes in relation to their life cycle, with chemical differences between and within species, with the influence of environment on chemical composition and with the role of depletion, respectively. The second and the third part of the book with a total of about 200 pages are reserved to index purposes. There is firstly an index of chemical substances which contains the various compounds together with the pertaining page numbers of the text and the reference numbers of the bibliography. In a similar index the fish names are summarized. This is followed by lists of fish genera and common names of fishes, by the list of references with 1,407 citations and by the subject index.

The book contains many practical and very useful informations on the chemical analysis of fishes. Its special and unique importance, however, lies in the evaluation of a large number of original papers. It is, therefore, an indispensable book of reference for everybody engaged in fish biology.

K. KARZEL, *Bonn*

J. PAUL: **Cell and Tissue Culture**. 4th Ed. Livingstone, Edinburgh 1970. XII + 430 pp.; 60 fig.; 16 plates. £2.25.

This book which was published for the first time in 1959 appears now in its fourth, largely revised edition. A lot of new material has been added; this was not possible without increasing the number of pages. The book is devoted primarily to nearly all areas of cell, tissue and organ culture techniques. In chapters 1–4 some basic principles of cell biology are discussed. The remaining 17 chapters, however, deal entirely with practical topics, such as composition and preparation of culture media, cleaning and sterilisation procedures and aseptic techniques, with established cell lines, with morphological and quantitative studies on cultured cells and with many other topics.

As cell, tissue and organ culture techniques are now applied in many medical and biological disciplines this book will be of interest to numerous readers. It can be warmly recommended as a valuable source of information and as a very useful aid to everybody engaged in this field, to the beginner as well as to the experienced worker, to the technician as well as to the scientist.

K. KARZEL, *Bonn*

**Management of Renal Failure**. British Medical Bulletin, vol. 27. The British Council, London 1970. 95 pp.; £2.–.

This issue of the British Medical Bulletin is a multidisciplinary approach to management of renal failure. There are contributions on the management of uraemic emergency, on surgical and paediatric aspects, on problems of renal failure in the tropics, on the role of hypertension or anaemia, on the treatment with anti-

biotics and on the diagnostic application of radiology; four contributions are devoted to various aspects or various types of dialysis; further articles deal with dietary problems and with transplantation, respectively. The individual articles contain numerous valuable informations; the issue as a whole represents a very instructive review on most aspects of this important topic.

K. KARZEL, *Bonn*

G. E. PAGET (ed.): **Methods in Toxicology**. Blackwell, Oxford 1970. X + 390 pp., 15 fig.; £4.50.

Toxicology has gained increasing importance during the last one or two decades, particularly with regard to the evaluation of new developed drugs. This trend has led to the development of suitable methods or to the adaptation of existing techniques to toxicological problems. This book aims at giving an up-to-date account on the present state of knowledge in this field. It is written by 13 experienced authors and contains contributions on such topics as the design of toxicity tests, laboratory animals, tests for acute and chronic toxicity and for potential teratogenic, carcinogenic, sensitizing or dependence-producing actions, respectively, on inhalation toxicity, drug interaction, safety testing and on biochemical and haematological tests. The book offers a valuable aid for the everyday work in the toxicological laboratory. Since most of the contributions contain numerous literature citations, it is as well a useful source of references for further readings.

K. KARZEL, *Bonn*

D. R. SCHULTZ: **The Complement System**. Monographs in Allergy, vol. 6. Karger, Basel 1971. VIII + 131 pp., 6 fig., 10 tabl.; sFr. 43.50 / US\$10.45 / DM 43.50 / £4.60.

Complement research has made rapid progress during the last few years and it is now known that complement is involved in numerous biological processes. Complement abnormalities occur for example in certain human diseases, such as various kinds of inflammatory conditions, various types of anaemia or malignant diseases. This comprehensive review on the complement system in which particularly the literature of the last decade is evaluated will be of interest, therefore, to many readers of various medical disciplines. The author describes the characteristics of the complement system, methods for the separation of human complement components, the experimental use of inhibitors in the study of complement actions, interactions between complement, phagocytes and foreign particles, the action of complement and antibody on micro-organisms, relations with anaphylatoxin, and syntheses of complement components. Clinical problems, such as hereditary defects in the complement system or the role of the complement system in defined diseases are treated only briefly.

K. KARZEL, *Bonn*

H. AUTERHOFF: **Lehrbuch der Pharmazeutischen Chemie**. 6. Aufl. Wissenschaftliche Verlagsgesellschaft, Stuttgart 1971. XII + 536 pp.; DM 54.-.

This popular textbook on pharmaceutical chemistry, which was published for the first time in 1962, appears now in its 6th extensively revised and somewhat enlarged edition. It is addressed primarily to students of pharmacy and aims at fulfilling the

particular necessities of this discipline. The text is restricted as far as possible to the chemistry of pharmacologically important compounds, since the reader is expected to possess basic knowledge of organic and inorganic chemistry. The book consists of a smaller part (about 100 pages) on inorganic chemistry and a larger one (of about 400 pages) on organic chemistry. The first part is classified according to the periodic table, the second one partly according to chemical origin of the compounds and partly according to pharmacological action. Both parts contain besides chemical, physico-chemical and pharmaceutical facts many hints on the pharmacological, toxicological or physiological properties of the individual compounds. The instructive text is illustrated by a large number of figures with structure formulas and supplemented by selected literature references. The book can be warmly recommended to students of pharmacy, may be of value, however, as well to medical students as a supplement to pharmacological textbooks.

K. KARZEL, *Bonn*

B. GÖZSÜ and L. ΚΑΤΌ: **Balancing Mechanisms in Acute Inflammation**. Monograph No. 5. Institute of Microbiology and Hygiene of Montreal University, Montreal 1970. 376 pp., 23 fig.

This book on inflammation mechanisms does not intend to be another review of the literature on this subject, but rather aims at drawing 'attention to the gaps in our knowledge concerning the functional and causative interrelation between the injury and the different reactions to it'. The authors discuss the various processes involved in the development of inflammation, such as the peripheral circulation, its functions and its mediators; the chemical balancing mechanisms involved in the peripheral blood circulation; increased capillary permeability; mast cell response; humoral and neuronal factors; polymorphonuclear leucocytes; or the chemical mediation of inflammation. The last chapter is devoted to new avenues and perspectives, such as the role of induced histamine synthesis, special functions of lysosomes and lysosomal enzymes or to the role of endotoxins. The book is an interesting contribution to the general discussion on inflammation mechanisms and will be of value for everybody engaged in this field.

K. KARZEL, *Bonn*

E. JUCKER (ed.): **Progress in Drug Research**, vol. 14. Birkhäuser, Basel 1970. 586 pp.; DM 134.-.

The 14th volume of this well-introduced series takes into account the increasing importance and the rapidly growing knowledge in the field of general pharmacology. As much as 4 of the 7 articles in this volume are devoted entirely to problems in this field. The first 2 articles deal with reduction of drug action by drug combination (E. J. ARIENS) and with drug macromolecular interactions (S. EHRENPREIS), respectively. A further voluminous article discusses repercussions of the kind of the galenic preparation of drugs on drug actions (K. MÜNDEL). A shorter review (by G. B. WEST and M. S. STARR) reports on the role of kinins in shock. The 3 remaining articles are devoted to more or less special pharmacological problems, such as interactions between androgenic anabolic steroids and glucocorticoids (O. LINËT), to biological activity in the quinazalone series (A. H. AMIN *et al.*) and to synthetic and

natural drugs with acetylene structure (K. E. SCHULTE and G. RÜCKER). All contributions in this volume are again adequate to the high standard known from previous volumes of this series.

K. KARZEL, *Bonn*

W. N. ALDRIDGE (ed.): **Mechanisms of Toxicity**. Macmillan, London 1971. XIII + 257 pp.; £5.50.

This book contains the proceedings of a symposium which was organized by the Biological Council; this is a co-ordinating committee of a number of British scientific societies for the organization of symposia on drug action. The symposium took place in April 1970 in London. The subject was treated under multidisciplinary aspects and the matter was classified in 4 sections with the following headings: (1) reactions with enzymes (inhibition of monoamine oxidases and glutamine synthetases, respectively, and effects of anticholinesterases); (2) reactions with proteins (effects of lathyrogenic compounds, of acetylating drugs, toxic metals and beryllium); (3) cell injury (with contributions on beryllium, ribonucleic acid polymerase, cell suicide and *Amoeba proteus* as a model in toxicology, respectively); (4) lethal synthesis (with articles on 6-aminonicotinamide, hypoglycine and on the role of the liver and the gut flora, respectively). The organizers of the symposium have succeeded in presenting a cross-section through a number of important topics in this field which are not only theoretically interesting, but which could provide the basis for the solution of practical problems as well.

K. KARZEL, *Bonn*

F. VOGEL and G. RÖHRBORN (eds.): **Chemical Mutagenesis in Mammals and Man**. Springer, Berlin 1970. XIV + 519 pp., 95 fig.; DM 124.- / US\$34.10.

This book on chemical mutagenesis is based on a symposium which was held in October 1969. For the publication in this volume, however, the papers have been enlarged and a number of further contributions has been added. The first part deals with basic problems, such as mechanisms of mutations or spontaneous mutations in man, respectively, and furthermore contains a tabulated survey on mutagenic substances in human environment based on the evaluation of more than 1,000 publications. In the largest part of the book test methods are described as they are used at the time being in mutagenicity research with mammals. There are 16 contributions dealing solely with this topic, including one article on statistical methods which are suited for this purpose. The third section is devoted to the application of the described methods and to findings obtained so far, mainly on mutagenic influences of cytostatic drugs; this section provides, in addition, numerous further technical hints. The book contains a wealth of valuable informations and will be an inestimable aid for everybody who is working in mutagenesis research or who is confronted with any problems in this field.

K. KARZEL, *Bonn*