# Book Reviews

**Chemical Control of Fibrinolysis–Thrombolysis. Theory and Clinical Applications.** Edited by Joseph M. Schor. Wiley–Interscience. New York, N. Y. 1970. xvi + 328 pp. 23.5 × 16 cm. $17.95.

You can try to avoid thromboembolic disease by consuming a low-lipid or at least highly unsaturated fat diet, by living according to Horace's *auream mediocritatem*, and otherwise observing the rules of reason. But if you are one of the 1–2 million U.S. patients in whose system a thrombus of appreciable size has formed, you have to turn to more concerted measures. Anticoagulants can lower the incidence of further thrombosis, and in desperate cases the thrombus might be excised. However, lysis of the clot offers the best hope of removing the damage, and attempts in this direction have been made with fibrinolytic enzymes (streptokinase, urokinase) for 5 decades, and with drugs for two. Researches on such drugs have encompassed a better understanding of mechanisms of fibrinolysis and clot formation and methods to measure these processes *in vitro* and *in vivo*. Synthetic fibrinolytic or thrombolytic drugs can be anticoagulants, inducers of fibrinolysis, and inhibitors of platelet aggregation, depending on their concentration. Some anti-inflammatory drugs lyse clots, and some vasoactive hormones, histamine, atropine, and serotonin, can increase fibrinolysis and can thus serve as points of departure for SAR studies. Other drugs such as bisobrin were the results of screening. Von Kaulla, a pioneer in developing meaningful tests for this purpose, and C. Hansch have combined their talents in one of the chapters to establish quantitative SAR by mathematical analysis of published activity data. The book also considers inhibitors of fibrinolysis, led by ε-aminocaproic acid and compounds with a similar spacing between the two functional groups. Thus the circle is closed and the mechanisms of clotting and clot lysis are opening their secrets to inspection.

Since drugs affecting clots and clotting mechanisms are among the most eagerly pursued by the drug industry, and by governmental research programs, the book should be welcomed to guide us into a potentially useful and exciting area of therapeutic science.

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**Radiation Protection and Sensitization. Proceedings of the Second International Symposium on Radiosensitizing Drugs, Rome, 1969.** Edited by Harold Moroson and Marcello Quintiliani. Barnes and Noble. New York, N. Y. 1970. xvi + 524 pp. 26.5 × 19 cm. $25.00

This symposium consists of 5 review papers and 68 other articles written in journal style and covering the different aspects of the subject from the physicochemical level to clinical application. The reviews concern molecular mechanisms, repair of DNA in biological systems, radiosensitization by halogenated pyrimidines, and sulfur and nonsulfur radioprotective agents. The other papers have been grouped under 5 headings: molecular processes; protection and sensitization in single cells (bacterial, normal, tumor) and in multicellular systems; biochemistry and pharmacology of protective and sensitizing compounds; and clinical studies.

The main value of a symposium volume, as compared with reading the same papers in scattered journals, lies in the appreciation of different viewpoints, placed side by side, which a symposium makes possible. The present book fills this need for the specialist in biopharmacology of radiation. It is well printed and indexed.

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**Progress in Biochemical Pharmacology: Synthesis and Use of Labelled Lipids and Sterols.** Vol. 5. Edited by E. Grossi-Paoletti. S. Karger, Basel. 1969. vi + 164 pp. 24.7 × 17.5 cm. $9.35.

Because of the exciting possibilities, in chemistry, biochemistry, and every medical science, offered by labeled lipids and sterols, studies in these fields began as soon as isotopic starting materials became widely available in the later 1940's. Thus, they served as a proving ground for isotopes in all stages of biosynthesis and metabolism, and have held on to this leading role ever since. The present symposium volume (Milan, 1968) reviews many of the more recent events and the fall-out from these studies in pharmacology and clinical medicine. Included are chapters on the biosynthesis of prostaglandins, lecithins, and similar compounds, and, of course, of steroid hormones.

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**Kinin Hormones.** By M. Rocha e Silva. Charles C. Thomas. Springfield, Ill. 1970. xii + 317 pp. 23.5 × 16 cm. $23.50

Since the discovery of bradykinin in 1948 by the author of this book, the field of kinin peptides has received wide attention, both for its chemical and pharmacological interest, and for the possibility of developing antagonist drugs. The history of the discovery of this group of materials makes fascinating reading. It began with work on the effects of Brasilian snake venoms and led, through pharmacologic reasoning which guided fractionation, to bradykinin. Broad biological investigation was followed by structure elucidation and several syntheses. The simple peptide structure made possible extensive molecular modification and the elaboration of optimal amino acid sequences and molecular size. The shape of the bradykinin molecule which can accomodate bonding to antagonists has made possible pertinent and sound speculations about kinin receptors and chemical mechanisms by which antagonists may exert their activity.

Bradykinin, angiotensin, slow-reacting substance, substance-P, eledoisin, and other compounds in this series are not hormones in the historic sense of the definition that hormones are elaborated by endocrine glands. Rather, they are released from precursor states by kininogen enzymes, but then behave very much like classical hormones. The role of kinins in pharmacology and medicine is bound to stimulate increasingly interesting research, and the survey of the field by its "father" is most appropriate at this time. The book is beautifully appointed and illustrated, clearly and interestingly written, and well documented. Chemists and biologists of all predilections will enjoy reading these well-done accounts.

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**The Pharmacological Basis of Therapeutics.** 4th Edition. Edited by L. S. Goodman and A. Gilman, with 42 contributors. McMillan. New York, N.Y. 1970. xx + 1794 pp. 19 × 26 cm. $25.00

This huge treatise of pharmacology has become the standard text and reference volume for medical students, pharmacologists, physicians, and medical scientists. Even the U. S. Congress uses it routinely as a basis for its judgements concerning all aspects of drugs. The qualities that have placed this book in this preeminent position are authoritative and comprehensive treatment of the subject matter, reliable evaluation of conflicting data, and a readable and even occasionally humorous presentation in lucid language. In this 4th edition the two original authors, now editors, have again succeeded in coordinating the chapters of 42 experts into one smoothly reading whole. Some of the less dynamic topics of pharmacology have been shortened, while some vigorously active chapters have been expanded or added, especially the chapter on drug addiction and abuse.

The former editions of this "blue bible of pharmacology" are so well known that the present edition does not require extensive discussion. This reviewer is concerned about the size of this treatise; no medical student can hope to read and retain even the highlights of this enormous book, much of which is set in small type. As pharmacology departments try to convey to their students a scientific approach to their field, a smaller, more theory-oriented text could be handled more easily in the short time available. Therefore the present book is bound to become more of a graduate text and reference volume, and lose its appeal as an undergraduate medical school text. Much of the material in *materia medica*, prescription writing, and correlation with fundamentals of physiology will probably lose its original impact since the type of readership is bound to change.

In order to bind 1800 pages under one cover, the publishers have used very thin paper. This paper folds and is scarred by repeated use. Even if the rapid flux of much of pharmacology would not require a new edition by 1975, the physical deterioration of the books in 5 years will make this necessary. No doubt, the next Goodman and Gilman will be as good as this one.

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**Human Schistosomiasis.** By PETER JORDAN and GERALD WEBBE. Charles C. Thomas. Springfield, Ill. 1970. xii + 212 pp. 14 × 22.2 cm. $8.75.

Schistosomiasis, once essentially a tropical snail-borne trematode infection, has been disseminated to various parts of the world by increased irrigation projects which offered wider opportunities for infestation with infected snail vectors. WHO estimated in 1965 that 150–200 × $10^6$ patients suffer from this parasitemia, and the chemotherapy of the disease has become of interest even to the pharmaceutical industry in the Western world since the trematodes no longer invade indigent peoples only. It was therefore timely to summarize the existing knowledge and experience, and we may be grateful to the expert authors for their labor of love in writing this well-documented and readable monograph.

The book describes the parasites, their life cycles, and the relationships to their hosts; the infection with various schistosomes, and the symptoms of these invasions. Diagnostic and clinical laboratory investigations from detection to autopsy are discussed, and the epidemiology of social, economic, immunological, animal reservoir, and other factors prerequisite for control is set forth. For our readership the chapter on chemotherapy of schistosomiasis is of special interest. Detailed accounts are given of niridazole, lucanthone, antimonials, trichlorophone, and other schistosomicides. The final chapter is devoted to the control of the spread of the disease by limiting snail population, improving sanitation, and many other methods.

The low price of this small volume, its accuracy, good print, and pleasing appearance make it easy to recommend the book to our readers.

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**A Handbook of Alkaloids and Alkaloid-Containing Plants.** ROBERT F. RAFFAUF. Wiley-Interscience. New York, N. Y. 1970. Pages unnumbered (estimated 1000). 16 × 23.5 cm. Photo-offset. $50.00.

This massive book contains 6 sections of photostated computer print-out listings: chemical nomenclature, botanical nomenclature, molecular formulas, molecular weights, structure tables, and structural formulas. If one wants to look up information about a given alkaloid, one has to find it by chemical or botanical nomenclature or molecular formula or weight, then try to find its ring system in the structural formulas, and go back to structure tables which contain the functional groups. There is no comment, no readable information: the interpretation of the data is left to the user, according to the preface.

The main value of this book is the inclusion of many alkaloids from difficultly accessible compendia in the less common foreign languages. This asset will have to compensate for the trouble the reader will have in finding his way through the maze of scattered data if he wants to locate a given alkaloid. Pharmacognosists will profit more than chemists from the use of this volume. However, a painful search in this book will save time over a less painful but more extended search in *Chemical Abstracts* or *Beilstein*.

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