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.