

REVIEWS

Mechanisms of Homogeneous Catalysis from Protons to Proteins. By MYRON L. BENDER. Wiley-Interscience, 605 Third Ave., New York, NY 10016, 1971. x + 686 pp. 15.5 × 23 cm. Price \$24.95.

It is probably best to point out at once that this reviewer worked in Prof. Bender's laboratory during the period 1959–1961. Such an association inevitably affects an evaluation of the present kind, providing the advantage of insight into the author's manner of attacking problems, and the disadvantage of unanalyzable subjectivity. The net effect is probably to make the reviewer's task more difficult.

This book discusses catalysis in solution at an advanced level. The title, though otherwise ill-chosen, is accurate. The treatment provides little introduction, and the reader should already possess a considerable background in organic reaction mechanisms and experimental solution kinetics. With this stipulation, the book is a valuable contribution to the study of catalytic mechanisms by one of the important workers in the field.

Following an introductory chapter of little distinction, the book consists of 18 chapters divided among four main parts: Acid-Base Catalysis; Organic and Inorganic Catalysis; Bridging Nonenzymic and Enzymic Catalysis; and Enzymic Catalysis. The author's primary message is that enzymic catalysis requires no magical or vitalistic explanations, though it is obviously very complicated, and that the essential features of enzymic catalysis can be found in simpler systems. There is a continuum of catalytic complexity, with the proton at one end and enzymes at the other. The author is very successful in making the connections between model systems and the enzymes. Such analogy-drawing is responsible for considerable repetition of material throughout the book.

One of the book's good features is its inclusion of catalytic mechanisms lying well outside the author's own field of carboxylic acid derivative chemistry. Superacids, organometallic catalysts, and aromatic hydroxylations are among these. Also useful is the authoritative discussion of enzyme determination by stoichiometric titration. The writing is uneven, being rather choppy in places. On balance, the book's role seems to be not as a text, but as a source-book for researchers in bioorganic mechanisms. For such readers it will be a superior reference work and stimulus.

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Cellular Pharmacology—The Effects of Drugs on Living Vertebrate Cells *in vitro*. By MARY DAWSON. Charles C Thomas, Springfield, IL 62703, 1972. xvi + 317 pp. 16 × 24 cm. Price \$18.00.

This is one of a series of American Lectures in Living Chemistry intended to advance chemistry in the cause of clinical practice. The book consists of seven chapters. The first two deal with the role of tissue culture in pharmacology and the second enumerates the available methods in assessing the effects of drugs. The remaining chapters are devoted to anticancer and antimicrobial substances, steroids, and anti-inflammatory drugs; substances used in drug formulations and miscellaneous drugs. The appendix deals with commonly used cells in culture studies. An author index for all the references is provided.

This book would not be highly useful for the average pharmacologist. Although a case is made for the adjunctive use of tissue culture in evaluating the value and hazard of clinically useful drugs and agents, to this reviewer, at this point in time, no significant reduction of *in vivo* evaluation would be obtained by such procedures. The book is useful, however, in pointing out the array of literature available in the various drug categories where tissue culture has

been employed. The "state of the art" may be significantly advanced by this compilation since it will bring to investigators recent articles in the field. As the author states in the first chapter, investigators must be fully aware of the limitations of the cell culture method. This is not to say that important information cannot be garnered by such studies.

I would recommend this book for the pharmacy library, primarily for advanced students. It would have little utility at the undergraduate level.

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NOTICES

Pharmacology for Medical Students, 2nd ed. By J. D. P. GRAHAM. Oxford University Press, 200 Madison Ave., New York, NY 10016, 1971. 160 pp. 21.5 × 27.5 cm. Price \$12.95 cloth, \$7.50 paper.

Antianginal Drugs. By R. CHARLIER. Springer-Verlag, New York, NY 10022, 1972. ix + 442 pp. 16 × 24.5 cm. Price \$48.60.

American Drug Index 1972. By CHARLES O. WILSON and TONY E. JONES. Lippincott, E. Washington Sq., Philadelphia, PA 19105, 1972. 699 pp. 13.3 × 20.5 cm. Price \$9.50.

Personality and Science. (A Ciba Foundation Blueprint). Edited by I. T. RAMSEY and RUTH PORTER. Churchill Livingstone, London, England, 1971. ix + 158 pp. 13.5 × 21.7 cm.

Neurohypophysial Hormones. (Ciba Foundation Study Group No. 39). Edited by G. E. W. WOLSTENHOLME and JOAN BIRCH. Churchill Livingstone, London, England, 1971. ix + 146 pp. 12.4 × 18.5 cm.

Lactogenic Hormones. (A Ciba Foundation Symposium). Edited by G. E. W. WOLSTENHOLME and JULIE KNIGHT. Churchill Livingstone, 104 Gloucester Place, London W1H4AE, England, 1972. xi + 416 pp. 15 × 23.2 cm. Price £5.

Actualites Pharmacologiques. Edited by RENE HAZARD. Masson Et Cie, Editeurs, 120, Boul. Saint-Germain, Paris VIe, France, 1971. 242 pp. 16 × 24 cm. Price 100 fr. (French)

Chelates in Analytical Chemistry, Volume 3. Edited by H. A. FLASCHKA and A. J. BARNARD, JR. Marcel Dekker, Inc., 95 Madison Ave., New York, NY 10016, 1972. xi + 321 pp. 15 × 27 cm. Price \$19.75.

Chelates in Analytical Chemistry, Volume 4. Edited by H. A. FLASCHKA and A. J. BARNARD, JR. Marcel Dekker, Inc., 95 Madison Ave., New York, NY 10016, 1972. xi + 316 pp. 15 × 23 cm. Price \$23.50.

NEW JOURNALS

Kidney International. Edited by ROSCOE R. ROBINSON. Official Journal of the International Society of Nephrology, Springer-Verlag, 850 3rd Ave., New York, NY 10022, January 1972. 21 × 28 cm. Price \$14.50 subscription, 12 issues.

X-Ray Spectrometry. Edited by RON JENKINS. Heyden & Son Ltd., Spectrum House, Alderton Crescent, London, England NW4, January 1972. 21 × 30 cm. Price \$25.00 subscription, four issues.