design open to the medicinal chemist. Those who still argue that even this working hypothesis is tenuous will change their minds after contemplating the massive evidence presented in the first of the two volumes of this treatise. The subtitle "comprehensive" is no exaggeration. The careful preparation of each chapter, the measured clear judgement accorded to each fact stressing specificity and multiple actions, and the extensive and up-to-date literature coverage justify this designation. Smaller earlier monographs on biological and metabolic antagonism will be superseded by these books.

It has been suggested that many medical sciences should be grouped together in a department of metabolite antagonism. The titles of the chapters of the present book support such a view. They are (with authors): amino acid analogues (W. Shive and C. G. Skinner); polypeptides and proteins as inhibitors (E. J. Modest, G. L. Foley, and S. Farber); hexose and pentose analogues (R. M. Hochster); fatty acids and their analogues (P. G. Scholefield); phospholipids (J. B. Davenport); purine analogues (G. H. Hitchings and G. B. Elion); pyrimidine analogues (R. W. Brockman and E. P. Anderson); nucleic acids and nucleoproteins (K. A. O. Ellem and J. S. Colter); inhibition of amino acid decarboxylases (W. G. Clark); inhibitors, antagonists and inactivators in the etiology of diabetes mellitus in man (A. Mirsky); antagonists to fat-soluble (J. Green) and water-soluble (D. W. Wooley) vitamins; sulfonamides and folic acid antagonists (T. H. Jukes and H. P. Broquist); thyroxine analogues (S. B. Barker); inhibitors of steroid actions and cholesterol and steroid biosynthesis (R. I. Dorfman). The list of illustrious experts writing about their long-time major fields of interest is assurance of high standards. The only unsatisfactory chapter which could be termed sketchy is the last one; it barely touches upon the feverish activity in its field. Lest someone be disappointed by the absence of some major classes of anti-drugs, the titles of the chapters should be read with care. For example, only structural analogues of thyroxine are discussed in Barker's chapter while the bulk of antithyroid agents has not been mentioned.

The aim of this book is to present truly biochemically proven antagonists, and not just over-all structural analogues, some statements of Woolley's notwithstanding. A biochemically based definition of antagonists has long been needed; it should not discourage blue-sky dreaming about structural analogies but should require substantiation of these assumptions by enzymatic or biological experimentation. Every organic chemist who toys with the potential biological effects of structural analogs of metabolites should study this volume. So should biochemists and medical scientists, as well as microbiologists, nutritionists, botanists and others who wish to read about methodology, theory, and available results in this sprawling field of work.

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Medicinal Chemistry. Vol. VI. Edited by ERNEST E. CAMPAIGNE AND WALTER H. HARTUNG. Prepared under the auspices of the Division of Medicinal Chemistry of the American Chemical Society. John Wiley and Sons, Inc., New York and London. 1963. x + 356 pp. 22.5 × 24.5 cm. $10.00.

In the sixth volume of this series, whose first volume appeared in 1951, the tradition of unequalled completeness in a relatively restricted field of therapeutic agents is continued in three chapters: non-barbiturate hypnotics (245 pp., 723 references) (K. W. Wheeler); spinal cord depressants derived from polyols (43 pp., 77 ref.) (E. J. Pribyl); and X-ray contrast media (58 pp., 207 ref.) (J. O. Hoppe). Each chapter contains a brief historical review, a statement of the chemistry and physical properties of the compounds involved, a section on structure-activity relationships, and surveys of the pharmacology and uses of the materials. The bulk of the chapters consists of tables listing *every* compound with the respective activity, from the early 1900's to 1960. It may be assumed that no compound listed under pertinent reference terms in almost any journal, has been overlooked. On the other hand, this indiscriminate completeness has been achieved at the expense of selectivity. No one can do much with a statement in the literature that a compound is a "slight hypnotic," without any additional data, and it is doubtful whether such compounds should have been included. Also, one would wish for the more abundant use of generic instead of trademarked names in a scientific publication beamed at chemists and biologists. But these are minor faults. The great advantage of this series is the hope that further literature searches for the compounds under discussion should not be necessary.

With the appearance of other excellent reviews, though not as complete, one may wonder whether the editors of the various series could not coordinate their efforts to avoid substantial duplication. Also, these other series of review volumes on medicinal chemistry have whetted the reader's taste for a more enjoyable style that goes beyond the strict account of established facts. Editors of future volumes may well consider such a recommendation to their authors.

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Additions and Corrections

1961, Volume 3

J. D. P. Graham and G. W. L. James.

Page 490. In Table I, the legend for compound L_{21} should read R′ = R″ = CH_2=$CHCH_2$.

1963, Volume 6

G. Brooke Hoey, Robert D. Rands, George DeLaMater, Douglas W. Chapman, and Philip E. Wiegert: Synthesis of Derivatives of Isophthalamic Acid as X-Ray Contrast Agents.

Page 24. In column 2, line 1, for isothalamic read iothalamic.

Alfred Burger, Robert T. Standridge, and E. J. Ariens: Cyclopropyl and Cyclobutyl Analogs of Phenyl-Substituted Medicinal Agents.

Page 221. In the abstract, line 2, for N-methylsaccinimide read N-methylsuccinimide. In column 2, line 11, for presumable read presumably.

Page 224. In column 2, line 66, for ethyl actetate read ethyl cyanoacetate.

Page 225. In column 2, line 50, for ether read acetone; in line 68 for azine read azo compound.

L. Goldman and J. W. Marsico: Synthesis and Reactions of 3′-Amino-3′-deoxyribosides of 6-Chloropurine.

Page 414. The structural formulas in column 1 should be included in footnote 27.

Page 417. The structural formulas at the top of column 1 should be included in footnote 40 on page 416.