

BOOK REVIEWS

MEDICINAL CHEMISTRY (Vol. 2). A Series of Reviews prepared under the auspices of the Division of Medicinal Chemistry of the American Chemical Society. Edited by F. F. Blicke and C. M. Suter. Pp. vii + 311 (including Index). John Wiley & Sons, Inc., New York, and Chapman & Hall, Ltd., London, 1956. 80s.

This second volume of *Medicinal Chemistry* contains chapters on four topics, namely, the Cardiac Glycosides by A. Stoll, Synthetic Oestrogens by J. A. Hogg and J. Korman, Analgesics of the Arylpiperidine Series by C. M. Suter, and β -Haloethylamine Adrenergic Blocking Agents by G. E. Ullyot and J. F. Kerwin. As might be expected with such widely different subject matter and different authorship, the four chapters are uneven in both length and presentation.

The chapter on Some Chemical Aspects of the Cardiac Glycosides deals systematically with the constitution, configuration and synthesis of the aglycones, with the sugar components, and with the cleavage of the glycosides by enzyme action. A brief section is devoted to the pharmacology of these compounds. It is unfortunate that this chapter is already out of date, since it contains no references later than 1950. An attempt to make up for this deficiency by the inclusion of a six-page supplement by T. L. Johnson barely reaches the year 1953. The chapter on Synthetic Oestrogens which, largely as a result of numerous tables occupies more than half of the whole volume, contains little reading matter but will be valuable mainly as a documented record of published work. A few pages are devoted to historical matter and four members only, namely diethylstilboestrol, hexoestrol, doisyolic acid, and bisdehydrodoisyolic acid, are selected for discussion from the point of view of synthesis. Brief sections follow on the correlation of structure with oestrogenic activity, the metabolism of oestrogens, carcinogenesis, and methods of assay and biological tests. The Tables, which occupy 126 pages, record all compounds tested and give the method of testing used, the activity found, and the relevant references to the original literature. The usefulness of these Tables is limited by the absence of references dating later than about 1950. Again, a brief supplement records some more recent references up to 1953, but these do not refer directly to the Tables.

The chapter on Analgesics deals with the methods of synthesis of arylpiperidines and discusses the relationships which appear to hold in this series between structure and activity. This is a short and concise contribution with a few references up to 1953. The final chapter on β -Haloethylamine Adrenergic Blocking Agents provides a useful survey of structure-activity relationships in this field, and summarises methods of synthesis and testing. Numerous Tables are included which give the activity of compounds tested and appropriate references. The latter, however, do not extend beyond 1952.

There can be little doubt that this volume will prove to be of value to both pharmacologists and organic chemists. The general impression left with the reviewer, however, is that these chapters were written some years ago, and that for some undisclosed reason they were kept in cold storage until their publication in 1956. In three of the contributions half-hearted attempts have been made to make good these deficiencies by the provision of supplements or addenda. In any rapidly advancing field such procedures must inevitably produce a pervading sense of staleness. It is much to be hoped that future volumes in this potentially most valuable series will be more up-to-date.

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MEDICINAL CHEMISTRY (Vol. 3). A Series of Reviews prepared under the auspices of the Division of Medicinal Chemistry of the American Chemical Society. Edited by F. F. Blicke and R. H. Cox. Pp. vi + 346 (including Index). John Wiley & Sons, Inc., New York, and Chapman & Hall, Ltd., London, 1956. 84s.

This volume, like its predecessors, is intended to serve the interests of chemists and pharmacologists by the provision of comprehensive and systematic summaries in chosen fields. The topics selected for inclusion in the third volume are Methadone and Related Analgesics by T. P. Carney, Quaternary Ammonium Germicides by P. L. de Benneville, Non-mercurial Diuretics by V. Papesch and E. F. Schroeder, and Synthetic Analogues of Physostigmine by A. Stempel and J. A. Aeschlimann. Each chapter contains brief discussions on methods of synthesis and biological tests, but the main emphasis is on the recording of the results of tests for a particular type of pharmacological activity with references to the original literature. These records are systematically tabulated, with the result that more than half of the volume consists of Tables.

The chapter on Methadone and related analgesics is concise and self-contained, in contrast to those on Quaternary Ammonium Germicides and Non-mercurial Diuretics. The quaternary germicides cover a very wide range of chemical types, and brief mention is also made of related quaternary derivatives of arsenic and phosphorus. Among the non-mercurial diuretics is to be found an even greater variety of compounds, among which can be found no common chemical feature at all. For this reason it becomes almost impossible to discuss the question of the relation between diuretic activity and chemical structure in any wide sense. For practical reasons this chapter is devoted mainly, but not exclusively, to the field of the xanthines and structurally related compounds. In contrast, the final chapter on analogues of physostigmine, as might be expected, contains a very full account of the correlation of structure with activity.

The subjects chosen for this volume are all of live and wide interest, and the combinations of chemical and pharmacological information here assembled will be of great value to workers in these and closely related fields. One has to report, however, that the references survey the literature only up to 1952 (with a few references to 1953). The gap between the completion of the manuscript and the date of publication is still too wide.

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