mal 2:3 placement in ring A. To our knowledge, this would be the first example of such an aporphine alkaloid and, together with the crebanine structure, illustrates the necessity for extreme caution when applying biogenetic principles to solving structural problems in the aporphine group.

We are carrying out presently the synthesis of argemonine to further implement our structural assignment. This work will be the subject of a future communication.

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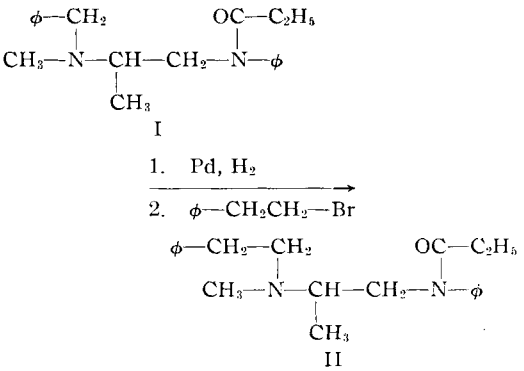
The Absolute Antipodal Activity of Analgesics in the Basic Anilide Series

Sir:

The influence of absolute configuration on the activity of potent analgesics possessing one asymmetric center has been demonstrated by Beckett and co-workers (1). These experiments have shown that most of the analgesic activity resides in the enantiomorph possessing the D-configuration. A hypothesis was advanced which attempted to define an analgesic receptor surface on the basis of three points of contact. This implies that the orientation of the methyl group on the asymmetric carbon of the methadones and thiambutenes is held in a favorable position only in those compounds having the D-configuration. In an effort directed at testing this hypothesis we have determined the absolute configuration of diampromid (II) (2), a member of a new class of analgesics of the basic anilide type.

The D-(−)-N-methyl-N-benzyl compound (I) (3), which has been related to D-alanine, was catalytically hydrogenolyzed with palladium on carbon according to the procedure of Wright, Brabander, and Hardy (2). The resulting debenzylated intermediate was then phenethylated with phenethyl bromide to give D-(−)-diampromid (II), $[\alpha]_D^{28°}$ −26.4° (c 5% in ethanol), b.p. 159–163° (0.1 mm.). The infrared spectrum is identical with that of racemic II (2). Wright, Brabander, and Hardy (4) have independently prepared (+) and (−)-diampromid. Their physical constants are in close agreement with our data.



The (+) and (−) enantiomers of compound I and of diampromid (II) were tested (5) subcutaneously on rats by a modification of the rat-tail heat response method. The L-(+)-isomers of I and II possess analgesic activity comparable to that of morphine, whereas the D-(−)-isomers are substantially less active. These pharmacological results are quite unexpected since it has been demonstrated that the more active enantiomorphs of methadone-type and thiambutene-type analgesics have the D-configuration (1). The potent analgesic action and addictive properties of I and II suggest that they are acting by a mechanism similar to that of methadone and other potent analgesics in spite of the fact that the more active enantiomorphs

of these compounds are related to L-(+)-alanine. The apparent inversion of antipodal activity on passing from the methadones to the basic anilides suggests that in addition to the orientation of the methyl group on the asymmetric carbon of I and II, other factors may also exert a profound influence on the absolute antipodal activity of the basic anilides.

We are presently investigating the configurations of other basic anilide analgesics and methadone-type compounds.

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Book Notices

Methods of Biochemical Analysis. Vol. 10. Edited by DAVID GLICK. John Wiley & Sons, Inc., Interscience Division, 440 Park Ave. South, New York 16, N. Y., 1962 xi + 399 pp. 15 × 23 cm. Price $14.50.

This tenth volume in a series concerned with methods of biochemical analysis contains sections on Separation of carbohydrate derivatives by gas-liquid partition chromatography, Determination of-SH groups in proteins, Measurement of sodium and potassium by glass electrodes, Measurement of UDP-Enzyme systems, Determination of dissociation constants for two-substrate enzyme systems, Dialysis, Countercurrent distribution, Partition methods for fractionation of cell particles and macromolecules, Determination and microscopic localization of cholesterol, and Chemical determination of flavins. Subject and author indexes for this volume as well as a cumulative index for the entire series enhance the value of the series as a reference source. Numerous literature references follow each section which should be an aid to workers employing the methods and techniques described.

Plante Medicinali, Chimica Farmacologia e Terrapia. Vol. 1. By BENIGNI C. CAPRA, and P. E. CATTORINI. dott. Inverni & Bella Beffa S.p.a., Via Ripamonti n. 99, Milano, Italy, 1962. vi + 730 pp. 16 × 23 cm. Price L. 8000.

This is a reference work (in Italian) on medicinal plants which covers chemical, pharmacologic, and therapeutic aspects of these substances. Volume 1 is apparently the first of a series since this volume includes plant names in the A-G group. The book is arranged alphabetically by plant name in monograph form. Each monograph includes identifying characteristics, extracts, and usual preparations with formulas as well as good, frequently extensive, literature references. An index is appended.

Analyze des Stéroïdes Hormonaux. Méthodes générales. Tome 1. Vol. 1. By M. F. JAYLE. Masson et Cie Editeurs, 120 boulevard Saint-Germain, Paris VI e, France, 1961. 276 pp. 16.5 × 24.5 cm. Price 45 NF.

This volume (in French) is one of a three volume set dealing with steroids and hormones. Volume 1 concerns itself with the structure, nomenclature, physical constants, hydrolysis, extraction, and purification of steroids. It also covers the analysis of conjugated steroids and spectophotometric and chromatographic analysis of steroids.

Précis de Botanique. Tome 1. Vol. 1. Morphologie et Reproduction des Plantes Vascularies, Systematique des Cryptogames, Vascularies et des Gymnospermes. By P. CRÉTÉ. Masson et Cie, Editeurs, 120 boulevard Saint-Germain, Paris VIe, France, 1962. viii + 348 pp. 16.5 × 21.7 cm. Price 34 NF.

This first volume of a two volume set on pharmaceutical botanicals (in French) includes materials on the morphologie and reproduction of vascular plants and contains a section dealing with the classification of these plants.

Gas Chromatography. By C. AMBROSE and BARBARA A. AMBROSE. D. Van Nostrand Co., Inc., 120 Alexander St., Princeton, N. J., 1962. vii + 220 pp. 13.5 × 21.5 cm. Price $6.75.

This book is designed as a survey of the literature on gas chromatography, including information to enable the reader to construct the necessary apparatus and utilize it intelligently. After a chapter dealing with the method generally, the book discusses retention parameters, effects on separations of solute-solvent interactions, and column performance, among other topics. A directory of equipment manufacturers is appended.