

limited number of compounds tested, it can be seen that the values obtained from two different sources are in good agreement and show high linear correlation coefficients ( $r$ ). Significantly, the slopes of the regressions are fairly close to unity. This is consistent with the idea that at least a portion of the analgesiophore in each series may be interacting with the analgesic receptor in a similar manner and therefore contributing to the pharmacological effect by the same mechanism.

It is of interest to point out that there is no parallelism in analgesic activity between substituted phenylpiperidine derivatives and structures related to morphine (4-7), despite the fact that both meperidine and morphine are antagonized by nalorphine (8). This suggests that compounds in series I, II, and III and structures related to morphine are interacting with common receptors but that different molecular modes of binding occur. Such nonparallelism may be reflective of differences in the conformational and

positional binding modes between substituted phenylpiperidines and morphine-like structures.

Such a method of comparing modes of molecular binding to common receptors conceivably can be applied to other types of medicinal agents.

- (1) Jaffe, H. H., *Chem. Rev.*, **53**, 191(1953).
- (2) Hansch, C., and Fujita, T., *J. Am. Chem. Soc.*, **86**, 1616(1964).
- (3) Janssen, P. A., and Eddy, N. B., *J. Med. Pharm. Chem.*, **2**, 31(1960).
- (4) Winter, C. A., Orahovats, P. D., and Lehman, E. G., *Arch. Intern. Pharmacodyn.*, **110**, 186(1957).
- (5) Eddy, N. B., Besendorf, H., and Pellmont, B., *Bull. Narcotics*, **10**, 23(1958).
- (6) Mellet, L. B., and Woods, L. A., in "Progress in Drug Research," vol. 5, Jucker, E., ed., Birkhauser Verlag, Basel, Switzerland, 1963, p. 157.
- (7) Ager, J. H., and May, E. L., *J. Org. Chem.*, **25**, 984(1960).
- (8) Woods, L. A., *Pharmacol. Rev.*, **8**, 175(1956).

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## Books

### REVIEWS

*Pharmacotherapeutics of Oral Disease.* Edited by A. H. KUTSCHER, E. V. ZEGARELLI, and G. A. HYMAN. McGraw-Hill Book Co., Inc., 330 W. 42nd St., New York, N. Y. 10036, 1964. xx + 690 pp. 18.5 × 25.5 cm. Price \$17.50.

This is a specialized text to provide the student and practicing dentist with a usable reference on management and treatment of oral disease. Oral diagnosis is not included, although brief reviews of certain disease states are included. Emphasis is placed on the current treatments of various oral diseases and the therapeutic applications and dosages of many drugs. Attention also is given to systemic conditions which affect oral health or which must be given special consideration during dental procedures to emphasize systemic-oral interrelationships.

Part One summarizes the general principles of pharmacology, drug classification, federal laws, and the role of the American Dental Association in the evaluation of drugs.

Part Two presents discussions of drug groups based on pharmacological action.

Part Three covers the treatment of specific oral and dental diseases as well as certain systemic diseases.

An interesting feature of the book is the "Epitome" in which the editors have united pertinent

information concerning the action, application, and untoward reactions of certain drugs used in many areas of dentistry. Included in the "Epitome" are analgesics, antibacterials, antibiotics, anti-histamines, corticosteroids, hemostatics, local anesthetics, protectants, sedatives, tranquilizers, and vitamins. The "Epitome" is printed on tinted paper in the middle of the book for easy location. An 8-page chapter is devoted to the general subject of prescription writing.

*British Pharmacopoeia 1963, Addendum 1964.* General Medical Council. The Pharmaceutical Press, 17 Bloomsbury Square, London WC1, 1964. Price \$5.40.

Under the direction of the General Medical Council, "The Addendum 1964" is published to present additions and/or deletions to the "British Pharmacopoeia 1963." Changes have been made in certain monographs and methods which are presently in the B. P. Attention is given to the incorporation of new developments into the procedures for detection of related foreign steroids by chromatographic analysis and for sterility testing. In addition, 60 monographs are presented for drugs and preparations which have not been described previously by the B. P. The "Addendum" became official on June 1, 1965.