Book Review

Screening Methods in Pharmacology. By Robert A. Turner. Academic Press Inc., New York, N. Y. 1965. viii + 332 pp. 14.5 × 23.7 cm. $12.00.

This book covers just what its title announces. It gives detailed cook book directions for many of the common methods of pharmacological screening, with examples of the technical and statistical evaluation of observed results, and of calculations involved in recording the experiments. A wise introductory chapter about the organization of screening councils the novice in the programming of his tests. A brief review of biochemical mechanisms of nervous transmission orients the junior pharmacologist in the significance of drug effects which are based on such mechanisms. General instructions about the suitability of a variety of animal preparations are given, with good detailed descriptions of quantal responses, the calculation of the ED_{50}, and generally useful methods in screening procedures. No doubt a biology student preparing himself for a job in the pharmaceutical industry will learn much about the "how" of screening. The "why," the reasoning underlying the many tests, the interminable efforts of sophisticated pharmacologists to understand intricate and overlapping facets of physiological reactions which complicate the evaluation of so many tests, has barely been alluded to. There are many valuable laboratory directions for tests involving neuropharmacological changes. However, twenty-three widely used and important tests are allotted only 2–3 pages each, less than even a bare minimum that one would hope to find. It seems that the author has concentrated on those tests with which he is personally familiar and added the many others because they are expected in such a book. Although one man cannot be familiar with all methods, perhaps a book on screening should not be written by one man.

The author states that he has collected the simplest and most widely used screening methods, most of which have been introduced in recent years. Some of the most common classical testing methods have been omitted, and one wonders whether they have suddenly become superannuated; the current pharmacological literature does not indicate this. Likewise, while the examples used to illustrate test methods present some major modern drugs, the omission of other equally important drugs is painfully evident.

The advanced pharmacologist who has to do screening will not find too much useful information in this volume. The book may be recommended to students, pharmacological technicians, and biologists and physicians who want to get a birds-eye view of pharmacological screening procedures.

University of Hawaii
Honolulu, Hawaii

Alfred Burger

Additions and Corrections

1963, Volume 6

R. M. Cresswell, T. Strauss, and George Bosworth Brown: Some 2-Substituted Aminopurines and Purine Analogs.

Page 818. In Table I, the solvents for chromatography were: A, 1-butanol–acetic acid–water (4:1:1), and B, 3% aqueous NH_4Cl.

1964, Volume 7

Hsi-Lung Pan and T. Lloyd Fletcher: Derivatives of Fluorenes. XVIII. New Halogenofluorenes. I. Potential Antitumor Agents.

Page 32. In the reaction scheme, LXVII should read LXVIII.

Page 34. The following compounds in the table which are named as 2,3,7-substituted derivatives of fluorene, are 2,4,7-substituted derivatives: XIX, XX, XXI, LII, LIII, LXXIII. In addition, in the text, 2,7-dichloro-3-nitrofluorene and 2,7-dichloro-3-fluorenamine should be named as the dichloro-4-nitro and dichloro-4-amino derivatives, respectively. All compounds designated with 4(?)-substituents are, in fact, 4-substituted derivatives.

Page 34. In Table II, no. VII, footnote *e* is missing in the yield column.

Page 37. In Table III, footnote *k* in column one should be down one line (opposite Sarcoma 180).

Page 37. In Table III, footnote *c*, BDP_1 should read BDF_1.

C. van de Westeringh, P. Van Daele, B. Hermans, C. Van der Eycken, J. Boey, and P. A. J. Janssen: 4-Substituted Piperidines. I. Derivatives of 4-*t*-Aminopiperidinecarboxamides.

Page 619. In the second column, a full line has been omitted between lines 1 and 2. The omitted line is shown in italic: ". . . in which NAA′ represents a *dialkylamino group or a saturated heterocyclic moiety and X represents a* nitrile . . ."

D. S. Matteson, A. H. Soloway, D. W. Tomlinson, J. D. Campbell, and G. A. Nixon: Synthesis and Biological Evaluation of Water-Soluble 2-Boronoethylthio Compounds.

Page 643. The following material was inadvertently omitted.

Dibutyl 2-Mercaptoethaneboronate (9a).—Passing H_2S through 19 g. of dibutyl ethyleneboronate in a quartz flask cooled in Dry Ice and irradiated with a 500-w. mercury vapor lamp for 27 hr. followed by distillation yielded 3 g. of dibutyl 2-mercaptoethaneboronate (**9a**), b.p. 64–68° (0.3 mm.). Alternately, hydrolysis of the crude dibutyl 2-acetylthioethaneboronate (**9b**) from 13.4 g. of thiolacetic acid and 32.5 g. of dibutyl ethyleneboronate was carried out with 100 ml. of 20% KOH at 40–50° (exothermic reaction) for 10 min. Continuous extraction with ether for 21 hr. followed by distillation yielded 21 g. (56%) of **9a**. The analytical sample was fractionated, b.p. 53–55° (0.1 mm.).

Anal. Calcd. for $C_{10}H_{23}BO_2S$: C, 55.05; H, 10.63; B, 4.96; S, 14.70. Found: C, 55.31; H, 10.67; B, 5.16; S, 14.49.

2-(2-Boronoethylthio)pyrimidine (8).—Sodium butoxide from 0.05 g. of sodium in 15 ml. of butanol was added dropwise in 30 min. to a mixture of 2.23 g. of 2-chloropyrimidine and 4.43 g. of dibutyl 2-mercaptoethaneboronate (**9a**). The mixture was acidified with 25 ml. of 20% acetic acid, and the product was extracted with ether. The ether was evaporated, the residue was treated with a few milliliters of water, and the butanol-water azeotrope was removed under vacuum. The crude product (1.8 g.) was recrystallized from water; m.p. 108–111°.

Anal. Calcd. for $C_6H_9BO_2N_2S$: C, 39.16; H, 4.93; B, 5.88; N, 15.22; S, 17.42. Found: C, 39.03; H, 4.77; B, 5.80; N 15.14; S, 17.22.

1965, Volume 8

Frederick J. Marshall: Structure Studies on Vancomycin.

Page 18. In the fifth line of paragraph 5, the tentative formula of CDP-I should read $C_{83}H_{98}Cl_2N_{10}O_{32-33}$, instead of $C_{83}H_{98}Cl_2N_{10}O_{32-34}$.