

## Book Reviews

**BIOCHEMIC DRUG ASSAY METHODS WITH SPECIAL REFERENCE TO THE PHARMACODYNAMIC STANDARDIZATION OF DRUGS.** By Paul S. Pittenger, Ph. G., Ph. C., Phar. D., Instructor of Pharmacodynamics, Departments of Pharmacy and Chemistry, Medico-Chirurgical College, Philadelphia; Member of Committee on Physiological Testing of the American Pharmaceutical Association, Member of the American Chemical Society, American Pharmaceutical Association, etc., Philadelphia; P. Blakiston's Son & Co.

This manual has been prepared for the use of students of pharmacy, pharmaceutical chemistry and medicine, and pharmacologic experts. It represents a very large amount of original work, and is especially valuable for teaching purposes. The illustrations, many of which are original, are exceptionally good.

The subject matter embraces preliminary considerations, cardiac stimulants and depressants, epinephrine and products of the suprarenal gland, ergot, pituitary extracts, cannabis indica, technique and apparatus and solutions employed.

The manual is an admirable exposition upon a branch of work that has become of the greatest importance in pharmacy—pharmacologic standardization,—and the author deserves to be congratulated upon it.

The importance of pharmacologic standardization does not need to be discussed before pharmacists, for most of them are well aware that this is the only way that reliable preparations of certain important drugs can be made. Some unthinking individuals try to minimize the importance of such procedure on the ground of anti-vivisection. Physiologic standardization is the only means of eliminating worthless preparations of a certain class from the market, and it is certain that where human lives are at stake, the sacrifice of a few animals under anesthesia cannot be condemned.

The title of the book, "Biochemic Drug Assay Methods," is open to criticism, because the book is really not a work on biochemistry, but on the pharmacologic standardization of drugs; and the definition given of pharmacology (p. 3) is open to serious criticism because it is obsolete.

The term pharmacology is derived from the two Greek words meaning "medicine" and "discourse," and as formerly used meant "the sum of knowledge regarding medicines." But times change and the meanings of words change with them. "Pharmacology, in the modern and accepted meaning, treats of the action of chemical substances on living tissue—of the changes produced in the structure, composition and function of living bodies by unorganized chemically acting substances not belonging to their natural environment. Pharmacology, therefore, goes a step further than what used to be called physiologic action, in that it aims to furnish the explanation for the changes observed." (Sollmann).

That this definition is the accepted definition of the medical profession of this country to-day is shown by the fact that the American Medical Association uses the title "Section of Pharmacology and Therapeutics" for its section devoted to the study of the action of drugs on tissues, and therapeutics.