expensive physical examination, that will show beginning deviations from the normal. More detailed tests can be given where indicated by this examination.

In the field of individual health and medical guidance, this monograph represents advanced thinking and is an excellent contribution to the subject of preventive medicine.

FRED J. WAMPLER

The American Rolling Mill Company Baltimore, Maryland

## L'action des toxiques sur la cellule en division. Paul Sentein. Montpellier, France: Causse, Graille, Castelnau, 1941. Pp. 253. (Illustrated.)

This work comes from the Laboratoire d'Histologie de la Faculté de Médecine and the Centre Anti-Cancéreux de Montpellier. The review chapters are devoted to a chronology of the mitotic poisons of the sort many of us have wished was available. This begins by tracing the early work in Dustin's laboratory and its relation to antecedent and concurrent researches. The effects of proteins, peptones, and acids opened this history-making phase of research in mitosis. Then followed the discovery of early mitotic poisons: trypan blue, trypaflavine, and the arsenicals. Colchicine, although not the first poison caryoclasique, by its efficacy made possible whole new fields of research. Here Sentein outlines first the chronological course of discovery. He examines and rejects the early arguments for stimulation of mitosis by colchicine. The third section of the chapter is a compendium of information on variation in colchicine solutions when aged or exposed to light, and on variation in effects as solvent, organism, and site of administration are changed. Colchiceine is listed as more active than colchicine, in contrast to the opinions of most authors. Here and in subsequent chapters the historical approach is subordinated to arrangement by subject matter in a way that permits ready reference. The reader often wishes for a more complete literature list, however, as he finds references to work not listed in the bibliography. The third chapter reviews, briefly, other mitotic poisons: dyes, arsenicals, oils, narcotics, metaloids and metals, toxins and venoms, the aromatic hydrocarbons, and the sulfonamides. Uses for the colchicing technique in attacking biological problems take up the fourth chapter, which includes mostly studies of regeneration and hyperplasia, particularly under the influence of hormones. Next is outlined the history of cancer therapy in plants and animals by means of mitotic poisons. The sixth chapter is devoted to the author's own experiments. Effects of colchicine or chloral hydrate on mitosis in tissues of eggs, larvae, and adults of several amphibia provide a part of the fundamental approach which the author emphasizes as needful in the study of cancer. Colchicine blocked mitosis in human epitheliomata, and subsequent X-radiation eradicated the growths.

IVOR CORNMAN

## Scientific Book Register

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