

other reactions are detailed beautifully. This chapter should be read even by nonscientists who are charged with policy decisions in the introduction or removal of drugs with special and occasional toxic manifestations. It strikes an acceptable balance between a frank admission of such toxic reactions and the need for taking these toxicities into one's stride if the successful therapy of a vast majority of patients is at stake.

Myasthenia gravis is reviewed by Gilbert H. Glaser. Its history, pathology, diagnosis, pharmacology, and drug therapy is presented comprehensively in this chapter. Manuel R. Malinow offers a highly timely discussion of hormonal factors in atherosclerosis. In this disputed field, opinions and facts have shifted and reversed themselves during the last decade, and a searching compilation of these data is indeed welcome.

It has been said that more investigators have been kept alive by grants in the field of cancer chemotherapy, than have been killed by cancer. The two most overworked topics in this area have been alkylating agents and analogs of natural purine and pyrimidine constituents of nucleotides. This is an opportune time to review these two research fields which have proliferated at a rate approximating that of the malignant neoplasms that they are to inhibit. Stanley S. Brown surveys nitrogen mustards and related alkylating agents, and J. Henderson and H. G. Mandel present purine and pyrimidine antimetabolites in cancer chemotherapy. Trends in synthesis, leads obtained from metabolic, biochemical, and toxicological studies, and the mechanisms of action of such drugs are discussed lucidly. The ever-present dilemma of resistance to these agents, their use in the clinic, and a forecast of future trends of research and therapeutic usefulness are considered. Every medicinal chemist, medical scientist, and chemotherapist who wants to get into, or out of this area, should read these two chapters attentively. All chapters are documented with extensive reference lists, and a good author and subject index uphold the now established high tradition of this series of volumes.

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ALFRED BURGER

**High Molecular Weight Substances in Human Urine.** By J. STANTON KING and WILLIAM H. BOYCE, Bowman Gray School of Medicine. xvi + 165 pp. 24 × 16 cm. Charles C Thomas, Publisher, Springfield, Ill., 1963. \$7.50.

While many reviews on urinalysis and the identification of small ions and low-molecular weight compounds are available, such information and a thorough scientific interpretation of the observed facts had not been assembled for macromolecules. After two introductory chapters on the over-all aspects of the fractionation and methodology of urinary high-molecular weight materials, the following are discussed in detail: macromolecules found both in plasma and urine; fourteen classes of urinary enzymes and enzyme inhibitors; peptide hormones in urine; uromucoid, acid polysaccharides, and blood group substances in urine. The text is well written, easily readable, and yet heavily documented and critically surveyed. The clinical chemist, the urologist concerned with calculous disease and its biochemical causation, and the renal physiologist will all appreciate the compilation of the thousands of observations in this book. Interesting facets are the origin, role, and functions of uromucoid in different human races, the chemistry of the blood group substances, and the description of normal and pathological events associated with urinary macromolecules. The book fills a real need in interdisciplinary writing in a complicated and important biochemical and clinical area.

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ALFRED BURGER

**Outline of Pharmacology and Therapeutics.** By SISTER M. MARIEL, C. S. A. xvi + 297 pp. 23.5 × 16 cm. Charles C Thomas, Publisher, Springfield, Ill. \$12.50.

Nurses, pharmacy and medical students, and practising physicians will welcome this summary of drugs. It lists abbreviations used in prescription writing, conversion tables of weights and measures, dosage forms for adults and children, drug standards and combinations, drug names, side-effects, safety and legal measures in dispensing drugs, and many other facets of a practical *materia medica*. Written in telegraphic style, the book nevertheless presents a few basic facts about the history and mode of action of drugs. Notably absent are chemical names. For a quick survey and orientation in a given therapeutic situation, the small volume will serve as a satisfactory guide especially for those who do not ask too many questions about the "why" of drug action but want to know the "how" of practical drug applications. For nurses and pharmacists, the book can be recommended as a terse but useful text.

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**Medizin und Chemie.** Vol. VII. Articles from the medicinal chemical research departments of Farbenfabriken Bayer Aktiengesellschaft. 822 pp. 24 × 16 cm. Verlag Chemie, Weinheim, West Germany, 1963.

The 7th volume of this well known series of periodic publications from one of Europe's oldest (75 years) pharmaceutical chemical companies follows the footsteps of its six predecessors: it represents a peculiar mixture of exact scientific reports on subjects at the frontiers of medicinal science, of rose-colored accounts of relatively inefficient drugs and biological methods, and of overt though dignified indulgence in company history and advertising. This last facet appears prominently in the bibliographies which contain mostly references to articles from investigators within, or supported by the company, with considerable disregard of earlier or simultaneous achievements elsewhere. In some cases, this becomes too obvious: the discovery of the sulfonamide drugs occurred at the Pasteur Institute in Paris, to be sure, based on the work of G. Domagk at Bayer, but was neither achieved nor understood by the discoverers of the sulfonamide dyestuffs.

Nevertheless, the present book gives the history of a great tradition of fundamental medicinal studies and applications up to about 20 years ago until the interruption by World War II and the subsequent disorganization from which a complete recovery has not yet been achieved. Among the authors of new articles are many names which one associates with progressive thinking in medicinal science. The fields covered comprise pharmacodynamic agents, analgetics, antispasmodics, anticonvulsants, chemotherapeutic agents for tropical and bacterial infections, anthelmintics, antiviral agents, anticancer drugs, vitamins, polypeptides, sterilizing agents, and insecticides. Much of this wide spectrum of activity at Bayer is a direct duplication of effort in many other pharmaceutical companies, but a few chapters, *e.g.*, that on an inactivator of kallikrein, present novel ideas.

Medicinal scientists in all fields will find much of interest in the extensive synthetic and molecular modifications, descriptions of exact biological laboratory methods, and the instances of speculative ingenuity which may spark future advances in the great past tradition of the company publishing these researches.

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