

After injections of 4-aminodiphenyl, we were able to detect the presence of 4-nitrosodiphenyl in the blood by comparing the adsorption spectra of CCl_4 extracts with that of the synthetic product.

Fig. 2 illustrates N-hydroxylation of carcinogenic amines with isolated rat liver microsomes and TPNH. We were unable to effect a complete dissolution of 4-aminostilbene and 2-aminofluorene in the incubation mixtures; therefore, rates of N-oxidation may be assumed to be even higher.

Hultin¹² has proved that ^{14}C -2-aminofluorene is bound to the proteins of isolated liver microsomes in the presence of TPNH. The kinetics of N-hydroxylation of aromatic amines in such a system shows the same characteristics.⁵

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BOOK REVIEW

Advances in Pharmacology: edited by S. GARATTINI and P. A. SHORE, Vol. 1. Academic Press, New York and London, 1962, 475 pp.

In the preface to this first volume of *Advances in Pharmacology* the editors state that they had charged the contributors to present papers that would not be merely highly detailed review articles written by experts for the benefit of other experts, but also would be of such a nature as to allow "the initiate to ground himself readily in new research areas." Furthermore, the various authors were encouraged by the editors to formulate and consider hypotheses and concepts. From these two points of view, *i.e.* acceptability to the student and formulation of hypotheses, this book in general succeeds remarkably well. However, since the book consists of contributions from many authors, the extent to which the two criteria are met varies from paper to paper.

The selection of topics by the editors for this first volume is timely and one finds a subtle thread of continuity tying together the various papers. J. H. Burn and M. J. Rand, in an extremely lucid discussion, present their concept of the functioning of the adrenergic nerve fiber. This paper, which readily attains the two goals mentioned above, might well be offered as a selected reading to medical students who frequently exhibit great interest and no small amount of confusion in autonomic pharmacology. Continuing the interest in autonomic pharmacology, B. J. Haverback and S. K. Wirtschafter present a paper on the role of biogenic amines in gastrointestinal motility and gastric secretion; included is a section dealing with the metabolism of the pharmacologically active amines in patients with malignant carcinoid syndrome or various malabsorption diseases. Another aspect of biogenic amines is considered in a scholarly paper by J. P. Green on the binding and release of these compounds in tissues. This paper is probably the least easy for the neophyte in pharmacology to digest,

but it makes up for this shortcoming by being an unusually wide-ranging, thoroughly documented, and thought-provoking paper. The author exhibits a great breadth of knowledge and, according to the dictates of the editors, theorizes widely while presenting a wealth of factual material. Furthermore, this paper, to the best knowledge of this reviewer, is among the first complete reviews dealing with factors involved in the binding of biogenic amines in tissues. Extensively discussed is the discrepancy between the ability of various pharmacologically active agents to release amines from isolated granules and their inability to release these same amines in intact preparations.

After these papers, which deal primarily with basic biological phenomena, there are several concerned with discussions of the newer drugs used in various disease processes of considerable current interest. A. F. Green has contributed a chapter on antihypertensive drugs which excels, particularly, in the review of current information on the more recent adrenergic blocking agents, bretylium and guanethidine. D. Steinberg discusses the chemotherapeutic approaches to hyperlipidemia and in so doing presents a very lucid picture of an extremely complicated process. This paper may serve to launch the new student of pharmacology on investigations in this area, for the author points out very clearly what and where future research is needed. Of particular usefulness to the novice is Steinberg's critical analysis of the pitfalls in the work already accomplished in this field. The two following papers—on the pharmacological aspects of psychiatry, by M. Shephard and L. Wing, and on antithrombotic therapy, by M. Weiner—do not appear to contribute anything new to the literature, nor do they seem, to this reviewer, to re-examine any old information in a new light. One disturbing feature of the paper by Weiner is that a full 35% of his references were published prior to 1950 and only about 9% since 1959. Furthermore, this reader could find only one reference from 1961. Was there no other work reported on antithrombotic therapy in 1961? If there was, certainly the author had sufficient time to incorporate this information into his manuscript as evidenced by the fact that in J. P. Green's paper, referred to above, 150 references (approximately 20%) were cited from the 1961 literature, and 5% were from work reported in 1962.

The final chapter is by A. Conney and J. J. Burns and considers the factors that influence drug metabolism, an area to which these authors have made major contributions. This paper reviews for the first time the body of work concerning the alterations of drug metabolism caused by administration of the drugs themselves, and it has been eagerly anticipated by this reviewer. The authors completely document all the known examples of this particular phenomenon, but it was somewhat disappointing that they did not, to any great extent, take the editors' offer to theorize freely, and discuss their own ideas as to the mechanism of this most interesting phenomenon.

In general, the first volume of this series lives up to the editors' stated desires and is a valuable contribution to the literature.

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