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PREFACE

Today, we live in a society that is becoming increasingly aware of the dangers of drugs, pollutants, food additives, alcohol, and carcinogenic agents. Biomedical research aimed at an understanding of the metabolic effects evoked by such compounds has grown at a rapid pace during the last decade and has occupied the efforts of a growing group of dedicated investigators. The challenge to define and better understand man's ability to cope with such substances, coupled with the desire to better control and regulate their effects on critical cellular events related to hormonal and other endogenous metabolite interconversions, served as the philosophical focal point for the First International Symposium on Microsomes and Drug Oxidations which was held over four years ago at the National Institutes of Health, Bethesda, Maryland. The success of that meeting is reflected by the recent rapid growth of scientific literature in the field of drug metabolism culminating in the establishment of a new journal, *DRUG METABOLISM AND DISPOSITION: the biological fate of chemicals*, sponsored by the American Society for Pharmacology and Experimental Therapeutics.

The rapid growth of information on drug metabolism, together with the desire to foster interinstitutional cooperation and communication between investigators working to a common goal, dictated the need for this Second Symposium on Microsomes and Drug Oxidations held at Stanford University, Stanford, California, on July 29 to 31, 1972. With the advice of the Committee on Drug Safety, Drug Research Board of the National Academy of Sciences, and the Pharmacology-Toxicology Program of the National Institute of General Medical Sciences, an organizing committee composed of G. Cosmides, R. Estabrook, J. Gillette, R. Kuntzman, and G. Plaa was established which determined the program and selected outstanding contributors for the present Symposium. The objectives sought were to emphasize the most current advances while encompassing a broad representation of the diverse approaches used in the study of drug metabolism. Since the hemoprotein cytochrome P-450 plays a key role in the metabolism of many foreign substances, the presentations were heavily weighted toward an understanding of the properties and function of this catalyst and its environs. The program therefore started with a consideration of the chemistry and physical properties of various types of cytochrome P-450 and the dynamics of the microsomal membrane. A consideration of cytochrome P-450 function and the influence of inhibitors and inducers of drug metabolism coupled with an understanding of the synthesis and degradation of this hemoprotein were logical sequiturs. Since the domain of drug metabolism is not exclusively that of cytochrome P-450, and significant metabolism occurs in organs other than the liver, consideration was also given to amine oxidations and extrahepatic drug metabolism. The symposium culminated with presentations on clinical studies of drug metabolism in man and on the effect of environmental factors on drug metabolism in animals. The three-day symposium was attended by 300 scientists from nearly every part of the world who listened to

and actively discussed the 63 presentations. A spirit of friendship yet scientific challenge prevailed, resulting in a rewarding and highly informative meeting.

The success of a symposium depends heavily not only on the contributors and the sponsors, but also on those individuals who make the arrangements and work on the resulting publication. We were fortunate to have Mrs. Gladys Aronow of Palo Alto serve as coordinator for this Symposium. Her patience, organizing ability, and friendship will long be cherished by all the participants. A devoted and hardworking secretarial staff composed of Martha Tanksleary, Marie Rotondi, Donna Maxwell, Marilyn Polk, Sheryl Winn, and Patricia Randal made sense of the discussion comments and expedited the processing of manuscripts. Greatest credit goes to the staff of the journal, *DRUG METABOLISM AND DISPOSITION*, who prodded and toiled to ensure the rapid and timely publication of this volume: Carol Hilson in the editorial office and the Williams and Wilkins Redactory staff under Vivian Rhoads, especially Lani Ellison, chief redactor for the journal, accomplished the publication of this book in the time usually taken for a normal journal issue.

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