DIGITALIS AND SOME OF ITS DERIVATIVES

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Ladies and Gentlemen: I wish first to acknowledge the honor conferred upon me by the New England Heart Association through the invitation to address you this evening. The opportunity to discuss the subject of digitalis in the city of Boston, steeped in the traditions of cardiovascular research and rich in eminent leadership in cardiological practice, is indeed a great privilege. I feel doubly honored to have this opportunity on the occasion arranged as a tribute to the memory of one of New England’s most distinguished physicians.

I have planned to present the results of experiments and to discuss briefly lines of evidence having to do with various phases of the nature of the action of digitalis and its glycosides. Some are based on experiments performed on animals, others directly on human subjects. The account is not intended to exhaust the subject. It represents for the most part explorations in this field carried out during the past few years by a group of collaborators in our laboratory and clinics.

One of the popular formulations regarding the mechanism by which digitalis abolishes heart failure is based on the view that the essential action of digitalis is an action on the “tone” of the heart muscle. There is no general agreement as to the nature of the

1. Annual Jackson Lecture of the New England Heart Association, delivered at the Boston Medical Library, April 24, 1942.

2. From the Department of Pharmacology of Cornell University Medical College and the Cardiac Services of the Beth Israel Hospital and the Hospital for Joint Diseases in New York City. Chief collaborators: Drs. McKeen Cattell, Nathaniel T. Kwit, Janet Travell, Harold Otto, Milton Kramer, Theodore Fox and William Zahm.