Foreword

This issue of Hypertension, only the third since its inception as a new American Heart Association publication, is devoted entirely to the proceedings of the annual meeting of the Council for High Blood Pressure Research. This official joining of the Council proceedings with the journal, Hypertension, represents a departure from earlier publication of these proceedings as a supplement to Circulation Research. It signals, however, the continuation of a long tradition of rapid publication of papers from the program of the Council meeting. The papers found in this volume are chosen from the program arranged and selected by the Program Committee chaired by Dr. David Bohr. Prior to their acceptance, manuscripts were subjected to peer review by consultant referees selected by the Publications Committee.

I would like to gratefully acknowledge the excellent editorial work performed by my colleagues on this committee, Drs. Allen Cowley, Franklyn Knox, Suzanne Oparil, and Gordon Williams. Without their assistance and advice the rapid review and processing of these papers, and thus their early availability to investigators in the field, would not have been possible. The editorial processing of the entire proceedings was handled by an efficient collaborative effort between Janet Ellsworth of my office, and Jerre Myers, Assistant Editor of Hypertension.

Research in the field of hypertension continues to attract increasing numbers of investigators. This expanding interest has provided almost unparalleled growth of the body of knowledge concerning the mechanisms of dysfunction of arterial pressure regulation. Two papers in this volume, based on invited lectures, review the “state of the art.” The Arthur C. Corcoran Memorial Lecture presented by Robertson describes quantitative relationships between angiotensin II and aldosterone and sets the stage for papers on humoral and biochemical factors that influence renin activity. The presentation by Ganong on central neuroendocrine aspects of blood pressure regulation provides an introduction to a series of articles on neural control of the circulation in hypertension.

A paper describing kallikrein and trypsin-induced activation of prorenin is followed by a study of reaction conditions that modify the enzymatic activity of renin. The identification of a serum factor from hypertensive animals that increases vascular sodium and water content is followed by evidence for decreased venous distensibility of non-adrenergic origin in subjects with borderline hypertension. The four papers following Ganong’s review provide new data about central nervous system mechanisms in experimental hypertension. Arterial pressure is shown to be raised in dogs by chronic intraventricular administration of angiotensin II, while the next paper indicates that peripherally administered angiotensin II does not appear to reach the cerebrospinal fluid compartment. The last two papers of the series demonstrate that the area postrema plays a physiologicalpressor role in the dog and that lesions in the nucleus tractus solitarii of the dog produce sustained hypertension.

Three papers on adrenergic mechanisms in human hypertension are presented next. Patients with primary hypertension are demonstrated to show elevated levels of norepinephrine in cerebrospinal fluid. Evidence that sympathetic nervous system activity appears to be decreased in subjects with extremely high salt intakes is then presented, while the last paper in this group describes the characteristics of dopamine excretion in several forms of hypertension. The next two papers concern the effects of the converting enzyme inhibitor, captopril, on fluid and electrolyte balance in hypertensive subjects and the inhibitory effects of plasma proteins on the activity of human converting enzyme. The final paper in this group analyzes, in a large series of ambulatory subjects, the relationships between the renin-angiotensin-aldosterone axis and blood pressure.

157
The next four papers concern humoral factors in hypertension. The role of angiotensin II in modifying the renal response to renal artery stenosis is presented followed by hemodynamic studies on a vasodilator derived by semisynthetic means from extracts of renal medullary tissue. A paper on the interaction of prostacyclin with adrenergic transmission to vascular smooth muscle precedes a study on the possibility that salt-sensitive Dahl strain rats possess an anti-natriuretic humoral substance. The final papers of the volume consist of a review of the hypothesis that autoregulatory responses to elevated cardiac output are involved in the pathogenesis of hypertension, and a study demonstrating that mineralocorticoid hypertension in dogs is mediated almost exclusively by increased vascular resistance.

Readers of these proceedings should find them to be an informative and provocative view of current activities in hypertension research. The inaugural publication of the proceedings of the Council for High Blood Pressure Research in the new journal, *Hypertension*, marks a milestone in the development of the field. We welcome your advice and suggestions about how the excellent and well-established tradition of publishing these proceedings should be best continued.

*Michael J. Brody*

*Guest Editor*