Blood vessel dysfunction is responsible for many of the manifestations of a number of widespread diseases, such as hypertension, coronary heart disease, stroke and migraine. This recognition has triggered considerable effort in basic research into vascular smooth muscle function and its control by autonomic nerves, endothelium and hormones and also the search for useful drugs. As a result, an abundance of new findings in vascular science has accumulated during the last two decades. Designed to provide a synopsis of the most recent developments, a series of Symposia has been organized at intervals of 3 years as satellite symposia of the various International Congresses of Pharmacology and corresponding Proceedings and Abstracts have been published. Since most of the contributions have been focused on the neurovascular junction, the meeting has been named ‘International Symposium on Vascular Neuroeffector Mechanisms.’

This issue of Blood Vessels contains the chapters written by the invited speakers of the seventh of these Symposia, held in Bonn, Federal Republic of Germany, from July 8-11, 1990 – an official satellite of the Eleventh International Congress of Pharmacology. Abstracts of the Free Communications which represented an important part of the Symposium, have been published in this journal (Blood Vessels, 27, 28-63, 1990).

The Symposium brought together not only pharmacologists but also those working in other fields of basic biological sciences, such as anatomy, physiology, biochemistry and some clinical areas. The articles are grouped in six main areas. Firstly, factors involved in the control of vascular function, mainly neuronal and endothelial mechanisms are dealt with, followed by articles related to the vascular smooth muscle cell itself. The reports related to Physiology and Pathophysiology refer to more integrated systems, such as the cerebral circulation and the importance of the noradrenergic innervation and growth factors for morphological and functional changes. In view of the developments in the vascular renin-angiotensin system and their potential patho-physiological importance, there are several articles on this topic. New techniques in vascular research provide a basis for new results in the forthcoming years, and this is the concern of the final section.

Taken together, the present issue and the abstracts of the Symposium provide a synopsis of current trends in blood vessel research and their neuronal, endothelial, hormonal and pharmacological control.

Manfred Göthert, Bonn
John A. Bevan, Burlington, Vt.