On the Occasion of the 70th Birthday of Dr. Wilhelm Raab

Dr. Wilhelm Raab, Professor Emeritus and Director of the Cardiovascular Research Unit of the Division of Experimental Medicine at the University of Vermont, Burlington, U.S.A., and a long-time contributor to “Cardiologia”, will celebrate his 70th birthday on January 14, 1965. Dr. Raab, born in Vienna, Austria, in 1885, started his scientific career at the German University of Prague where he pursued studies in endocrinology. Later, as Assistant of Professor K. Wenckebach in Vienna and under Dr. Walter B. Cannon at Harvard, he described the depressor effect of hyperventilation in patients with “essential” hypertension, exaggerated excitability of the vasomotor centers under hypoxic conditions, and the occurrence of vascular crises following brain concussion. After having conducted in 1932 a world-wide epidemiologic inquiry on a possible relationship between the dietary intake of cholesterol and animal fat and atherosclerosis, he recommended in 1939 the specific antiatherogenic dietary rules which are now generally advocated.

In 1939, Dr. Raab joined the faculty of the University of Vermont and described an increase of the pressor response to catecholamines in man under the influence of adrenal mineralocorticoids. A similar increase, paralleled by sodium retention, was described by him as a characteristic early phenomenon in pre-toxemia of pregnancy. In 1942, he discovered the presence of catecholamines in brain tissue, particularly in the stem ganglia.

Under the impact of a near-fatal self-experimental with a large dose of epinephrine which produced typical symptoms of severe angina pectoris, and inspired by Dr. Cannon’s “sympathin” studies, Dr. Raab devoted his major efforts to the sympatho-adrenal system and the catecholamines. He was the first to show a specific avidity of the heart muscle and vascular walls to absorb and deactivate catecholamines from the blood. He also demonstrated an augmentation of myocardial norepinephrine under direct or reflex sympathetic stimulation; exaggerated catecholamine discharges in angina patients; a sustained hypercatecholemia in advanced renal insufficiency; inactivation of toxic catecholamine action by, and corresponding anti-anginal effectiveness of thiourea compounds; production of myocardial necroses by catecholamine-liberating physical and emotional stresses and their prevention by anti-adrenergic drugs; therapeutic effectiveness of X-ray irradiation over the adrenal glands in angina pectoris, and the production of severe myocardial anoxia by sympathetic stimulation when coronary flow is experimentally restricted.

The concept of a fundamental pathogenic role in ischemic heart disease of oxygen-wasting inotropic and chronotropic cardiac sympathetic over-activity due to lack of exercise (“loafer’s heart”), emotional tensions, and nicotine led Dr. Raab to establish a Preventive Heart Reconditioning Foundation with the purpose of introducing into the U.S.A. the European mass reconditioning programs. In 1959, he organized an international Symposium on “The Catecholamines in Cardiovascular Pathology”, and in August
of 1964 the “First International Conference on Preventive Cardiology”. E. Lepeschkin, Burlington, Vt.