

Karel Čapek, M.D., Ph.D. (1925-2002)



The Editorial Board is sad to announce the death of Karel Čapek, M.D., Ph.D. who was the Editor-in-Chief of our journal *Physiological Research* (formerly *Physiologia Bohemoslovaca*) from 1970-1990. It was thanks to his wise and non-controversial management, that he was implemental in the survival of our journal during a critical historical period.

Dr. K. Čapek was born on November 10, 1925 in Prague. Here he also attended secondary school and graduated during the war years. As the Czech universities had been closed by the Nazi he had to wait until the end of the war to attend the University and worked as a postman in the meantime. Even though he wavered between medicine and natural sciences he enrolled in the Faculty of Medicine, Charles University, Prague in 1945. He graduated from the University in 1950 and worked for two years as an assistant at the Institute of Experimental Pathology of the University. In 1952 he

started to work in the Institute of Physiology of the Czechoslovak Academy of Sciences and remained here for 40 years till his retirement in 1991. In the group of Evolutionary Physiology (head Prof. J. Křeček) he began to study the regulation of water metabolism during early postnatal development and particularly the neural control of micturition in puppies. In 1954 he submitted a Thesis that was entitled "Development of reflex control of micturition during early postnatal development of mammals" and received his Ph.D. (CSc) degree. During the second half of the 1950s and early 1960s he was involved in the cation (particularly sodium) transport in the kidney in collaboration with Prof. A. Kleinzeller, founder of the Prague school of membrane transport.

However, due to intricate anatomical organization of the kidney, the technique of renal slices originally used by K. Čapek was inadequate for studying the transport properties of nephrons. He therefore decided to master micropuncture techniques, that were introduced by Richards before the Second World War, and were elaborated further during the 1950s in several European and US laboratories. As these techniques opened a new era for kidney physiology by making possible the direct study of the sites and extent of transport processes along the main accessible nephron segments, Dr. Čapek decided to establish the first renal micropuncture laboratory in Czechoslovakia. The scholarship of the International Atomic Energy Agency allowed him to spend two years as a postdoctoral fellow (1963-1965) with a leader in this field Prof. K. J. Ullrich at the Institut für Physiologie der Freien Universität in Berlin (West). His stay in Berlin helped him to become acquainted with many leading renal physiologists all over the world including Prof. Ullrich whom he visited repeatedly in Berlin and later in the Max Planck Institut für Biophysik in Frankfurt/Main. The foundation of the micropuncture laboratory and later the Department of Renal Physiology in Prague under the leadership of Dr. Čapek and Dr. J. Martinek

attracted foreign postdoctoral students who wanted to obtain training in micropuncture techniques in the Institute. Dr. Čapek's knowledge about renal development is summarized in a review that he published in 1968 together with J. Heller and J. Martínek as a chapter in the "Handbuch der Inneren Medizin". After the Soviet invasion of Czechoslovakia in August 1968, Dr. Čapek spent one year as a visiting professor in Albuquerque at the University of New Mexico School of Medicine. During his sojourn at the Department of Prof. S. Solomon he studied the developmental aspects of glomerular filtration rate (GFR) and the impact of nutrition. There he showed that increased milk availability results in a redistribution of GFR. After coming back to Czechoslovakia he restored the cooperation with German colleagues and due to relatively good opportunities to travel to the West continued to collaborate with the laboratory of Prof. Ullrich in Frankfurt. These international contacts

helped him to co-organize (with Prof. J. Heller) the IV. European Colloquium on Renal Physiology in Prague in 1982. Toward the end of his career, Dr. Čapek turned his attention to electrolyte transport mechanisms in the colon.

When he retired, his main interest centred on ecology and survival of coniferous trees in an unhealthy Central European environment. He made international contacts with Swedish and American environmentalists and launched promising projects in an effort to develop smog-resistant conifers.

Dr. K. Čapek was an enthusiastic biologist with a knack in finding novel approaches to widely differing problems. He was a likable person and will be missed by his many friends and associates.

Editorial Board