

# Eva Syková

Professor Eva Syková, M.D., Ph.D, D.Sc., was born in Czechoslovakia, received her M.D. from Charles University in Prague in 1970 and her Ph.D. from the Institute of Physiology of the Czechoslovak Academy of Sciences in 1976. In 1983 she became the Head of the Laboratory of Neurohumoral Regulations at the Institute of Physiological Regulations in Prague; in 1990 she was awarded a D.Sc. from Masaryk University and became the Head of the Department of Neuroscience at the Institute of Experimental Medicine, Academy of Sciences of the Czech Republic (IEM ASCR) in 1991. In 1996 she was also appointed Chairman of the Institute of Neuroscience at Charles University as the founder of that Institute. Since 2000 she has been Professor of Physiology and Head of the National Center for Cell Therapy and Tissue Repair. From 2001 up to now, she is the Director of the Institute of Experimental Medicine ASCR. The Institute was selected as an EU Centre of Excellence with Prof. Syková serving as Principal Coordinator.

Professor Syková has published more than 720 scientific communications, including 156 papers in peer-reviewed journals and 35 book chapters. She is the author of 1 book (Springer-Verlag) and the co-editor of 4 books. Her publications have been cited more than 2766 times by other authors, and her Hirsch index is 38. In addition, she is a co-holder of 4 patents. She has given more than 100 invited lectures and seminars at foreign universities and international conferences and has co-organized 14 international meetings and 3 teaching workshops for young scientists. Among her 12 scientific awards are the prizes of the Czech Physiological Society, the Czech Neuroscience Society, the Czech Medical Society, the Czech Academy of Sciences, and the Purkyně medal for her merit in biological sciences. She has been elected a member of Academia Europea, the European Academy of Sciences, the Czech Medical Academy, the Russian Academy of Natural Sciences and Czech Medical Academy. She serves on the editorial boards of 5 international journals and also as a member of the executive committees of a number of Czech and international scientific societies and boards. Since 2005 she has been a member of the Scientific Council of the Ministry of Health of the Czech Republic and the President of the Czech Neuroscience Society.

The scientific interests of Professor Syková include both basic and clinical research, namely the origins, mechanisms and maintenance of ionic and volume homeostasis in the CNS; the extracellular space as the microenvironment of nerve cells and a communication channel; extrasynaptic "volume" transmission in the CNS, mediated by diffusion in the extracellular space; changes in the size and geometry of the extracellular space, studied using ion-selective microelectrodes and magnetic resonance imaging; the role of glial cells in health and disease; the diffusion properties and underlying mechanisms of many pathological states including ischemia, Parkinson's disease, Alzheimer's disease and tumors; spinal cord physiology; the use of biomaterials as tissue bridges, nanofibers as 3D stem cell carriers and nanoparticles for stem cell imaging; and the role of stem cells in the rescue and replacement of damaged tissue.

