



Danuta Kowalska (1944 - 2002)

Danuta (Danka) Kowalska studied at the Department of Biology of Warsaw University. In 1968 she graduated defending a thesis on the topography of cortical organelle in protozoa, which summed up her research done in the laboratory of Prof. J. Kaczanowska. In 1969 she started Ph. D. studies in the Nencki Institute of Experimental Biology. There she joined the Laboratory of Defensive Conditioned Reflexes headed by Prof. K. Zieliński, where she was permanently employed for the rest of her life. She investigated the process of differentiation and reversal of the instrumental appetitive and defensive reflexes in cats and dogs with various partial lesions of the prefrontal cortex. In 1977 she defended her doctoral dissertation on signaling properties of auditory stimuli in the process of conditioning. Already in that early period of her scientific career Danka won her reputation of an excellent surgeon and an expert in designing behavioral experiments and evaluating their results. She also showed her talent for collaboration, conducting experiments with both other experienced neurophysiologists, J. Dąbrowska and J. Brennan and her young colleagues, E. Jakubowska and T. Werka

Afterwards, Danka started to develop her own line of research. She started a life-long collaboration in neuroanatomy with A. Kosmal from the Nencki Institute. In 1983 - 1985 she was at the post-doctoral training at the NIMH (Bethesda), in the Laboratory of Neuropsychology headed by Prof. M. Mishkin. There she learned the methods used in testing of the auditory recognition memory in monkeys. Afterwards, she visited the laboratory almost every year, either as a guest scientist or a visitor. After returning to Poland, she designed a new method of surgery of the hippocampus and rhinal cortex in the dog and another new method of testing the auditory recognition memory with trial-unique stimuli. These methods allowed her to prove that in the dog neither hippocampus nor the rhinal cortex participate in that memory, and therefore that the process of recognition of the auditory information is organized differently than that of the visual, tactile or olfactory stimuli, on both morphological and functional levels. This discovery was her great scientific achievement. She presented her research on dogs and monkeys at many international congresses and symposia in Europe, Canada and USA. From 1996 to 2001 she participated in all "Annual Canine Cognition, Neuropathology and Aging Conferences", presenting her results and teaching other researchers in her methods. She was an author of more than 50 papers published in many prestigious neurosciences journal and of several chapters in scientific books.

She also gave lectures on learning and memory for students of psychology and biology at the Warsaw University and for the postgraduate students at the Nencki Institute. In 2002 Danka defended the D.Sc. (habilitation) degree and in recognition of her achievements she was tenured as an associate professor in the Nencki Institute.

Her knowledge, unique skills, scientific passion, open and warm attitude towards people resulted in numerous scientific collaborations, first of all with M. Mishkin (Bethesda), but also with M.W. Brown (Bristol University), N.W. Milgram (Toronto University), J. Rauschecker (Georgetown University), H. Scheich (Leibnitz Institute for Neurobiology in Magdeburg) and C.W. Cotman (California University). She shared common interests and friendship with many other researchers. In the same time Danka was a devoted and loving wife and mother of three children, and lately a beloved grandmother.

The unexpected illness disabled her at the time when she was planning a new series of experiments and organizing a large-scale international collaboration with the aim of investigating memory, cognition and cortical topography in the dog. While in the hospital, she persisted in finishing a paper that reported the research of her graduate student P. Kućmerek. The paper was submitted to the *Acta Neurobiologiae Experimentalis* soon after her death and appears in this issue. All of those who visited her in these last days were deeply impressed and moved by the courage with which she endured the disease, even though she realized that it is incurable. We have lost a warm and loyal friend, and a passionate, uncompromising scientist.

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