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Jan Bureš (1926–2012)

Jan Bureš with his wife Olga Burešova, also an eminent neuroscientist

Jan Bureš, an exceptionally humane, creative, and gifted experimentalist who died on August 24, 2012 at the age of 86, is rightly viewed as one of the founding fathers of modern neuroscience. Jan was born June 13, 1926 in the Czech Republic, and soon after studying medicine, established with Olga Burešova, his wife and lifelong collaborator, the Laboratory of Neurophysiology of Memory in the Institute of Physiology of the Academy of Sciences in Prague. The laboratory was to become internationally renowned as an intellectual oasis and a hub of innovation.

Already in the 1950s, at a quite young age, Jan Bureš had made his mark, first with his doctoral work on epilepsy and then with his seminal research on cortical spreading depression. Jan and Olga brought that phenomenon under experimental control, worked out the mechanism, then by using it to temporarily inactivate brain regions during select phases of learning, they pioneered the concept of a reversible brain lesion that remains central to contemporary attempts to dissect the brain circuits of learning and memory.

Jan participated in the famous Moscow Colloquium (1958), and his chapter in the 1960 volume helped bring his work to the attention of a western audience. Not long after that, young scientists from the west came to Prague to do postdoctoral work with Jan, establishing an international flavor that permeated laboratory life and remained throughout all of Jan's years. De facto, the lab was an international training center. Jan mentored over 100 graduate and postdoctoral students and visiting scientists from at least 27 different countries.

Jan Bureš was the consummate tinkerer. He invented devices, he created experimental paradigms and constructed apparatus, he developed electrophysiological techniques. He wrote important books, and published nearly 500 papers (the latest in PNAS this year). His publications ranged over topics as diverse as interhemispheric transfer of memory, conditioned taste aversion, epilepsy, and many more. Since the late 1990's Jan focused on spatial and cognitive learning in various species, including human patient populations. He has always elevated testing and eschewed theorizing. He was a passionate and masterful experimentalist.

Jan Bureš played a very important role in national and international neuroscience. He participated in the joint Soviet and USA conference that got IBRO going in the early 1960s, then served on its Central and Governing Councils until the late 1990s. He was influential in many other societies, and on the board of innumerable journals. He was a prodigious reviewer, and a tough one too.

Jan Bureš received many honors and awards in his lifetime, including election as a Foreign Associate of the National Academy of Sciences (US). Despite his prominence, Jan was always accessible and eagerly accepted virtually every motivated student and opportunity for a new collaboration.

No summing up of Jan Bureš' life is possible that fails to stress his humanity. He, indeed he and Olga together, lived as principled a life, as humane a life, as one can imagine in the circumstances they found themselves in. Jan Bureš was unfailingly nice, even when he was being harshly truthful. He looked for and inspired the best in people. He was a font of wisdom about science, about central Europe, about Prague, about life.

André A. Fenton and Lynn Nadel

It is difficult to reconcile oneself with the fact that Professor Jan Bureš is gone. We will remember him as a great scientist and explorer of the nervous system, charismatic leader of his team, kind and patient teacher as well as brave, unpretentious and cheerful person. Students and scientists from East and West trained and conducted experiments in the Laboratory of Neurophysiology of Memory established by Jan Bureš and Olga Burešova, his wife and life-long scientific collaborator (deceased 2006). Many researchers learned neurophysiological and behavioral techniques from their books.

Collaboration of Professor Bureš with the Nencki Institute started at the times of Professor Jerzy Konorski leadership of the Department of Neurophysiology. They appreciated and respected each other very much. But Professor Bureš had scientific ties with many other members of the Nencki Institute and Polish neuroscience. Closest collaboration united Professor Bureš with Irena Łukaszewska, Alicja Markowska and Małgorzata Węsierska. This cooperation has led to interesting scientific results and also to long-lasting friendships. Collaboration of Dr. Węsierska with Jan Bureš and Andre Fenton, started in 1997, resulted not only with valuable and well published results, but also with the introduction of the new behavioral test invented in the Bureš laboratory called the place avoidance test to the Nencki Institute, enabling investigation of the influence of the genetic, biochemical or pharmacological manipulations on the cognitive processes and spatial memory. Recently it has been adapted to the study of spatial memory in humans. Bureš served also as a member of scientific committees of many conferences organized in Poland and was invited there as plenary speaker. In 1997 he was the honorary guest of the Congress of the Polish Neuroscience Society in Łódź.

We remember with gratitude the important role that Professor Bureš played in our Journal, Acta Neurobiologiae Experimentalis. He was the member of the Board of ANE for almost 40 years, since 1973 and in that time reviewed a large number of manuscripts sent to ANE. He played an important role in survival and development of our Journal during hard times of political transformation of Poland in 1990s. At that time ANE was close to be removed from the list of journals with the Impact Factor, which would result in its quick demise. Strong support letter of Professor Bureš was one of the important factors that prevented that decision. That allowed our Journal to survive and quickly improve its quality. Only many years later he confessed to our Editor, that he reckoned our chances of survival as very slim.

Memories of Professor Jan Bureš remain alive in the minds of his students and collaborators. His ideas are still influencing their scientific thinking, but Bureš also taught his students and collaborators with his own example to see good things in everything. We are grateful for his lessons and will try to remember it.

Małgorzata Węsierska and Krzysztof Turlejski

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