

IN MEMORIAM

Mark Rayport, M.D. C.M., Ph.D., F.A.C.S.

An Appreciation by George Ojemann

The generation of physiologically oriented surgical epileptologists trained by Wilder Penfield lost a distinguished member with the passing of Mark Rayport, M.D. C.M., Ph.D., F.A.C.S., on March 4, 2003, at age 80 years. Dr. Rayport survived leukemia in 1982, but then a second leukemia developed in 2002. At the time of his death, Dr. Rayport was Professor Emeritus of Neurological Surgery and Radiology at the Medical College of Ohio.

Dr. Rayport pioneered an interdisciplinary approach to the study and treatment of epilepsy. His partner in care of the whole patient was Dr. Shirley Ferguson, a psychiatrist and his wife for more than 50 years. Before doing so was second nature to epileptologists, Drs. Rayport and Ferguson emphasized quality of life (1–3), the psychiatric con-

sequences of resective epilepsy surgery (4), and the important relations between psychiatric syndromes and epilepsy (5–11). From the beginning of his epilepsy surgery career, Dr. Rayport advocated extensive physiologic evaluation of prospective surgical candidates before surgery. In patients with stereotactically implanted electrodes who underwent brain stimulation, it was possible more accurately to define the epileptogenic tissue, but also to substantiate hypotheses about the intrinsic nature of some of the behavioral problems occurring in patients with temporolimbic epilepsy. Dr. Rayport was among the first to use single neuronal unit recordings in human epilepsy (26–29). Subsequently he contributed to the performance of corpus callosal resection, emphasizing the value of a two-stage procedure, the search for operable partial epilepsies after callosotomy (12), and the potential for behavioral and speech complications resulting from hemispheric competition (13,14).

Dr. Rayport's interests in neurosurgery were not limited to epilepsy. He published on a variety of subjects, including hydrocephalus, for which he developed new shunt designs (15), computed tomographic biopsy and cyst aspiration (16), use of antibiotics (17,18), aspects of head injury (19,20), and multicentric tumors (21). He recognized the importance of the Talairach and Tournoux stereotaxic atlas for the future of neurosurgery, as well as brain imaging, and made the atlas available to the English-speaking world through his lucid translation (31). Early in his career, he reported on the effects and treatment of addiction (23–25).

Dr. Rayport was born in Kharkov, Ukraine, USSR, in 1922. His mother was a physician, and his father, a lawyer. From 1925 to 1930, the family lived in Berlin, where his father was assigned as a commercial attaché by the Soviet government. With the changing political conditions, the family moved to Brussels. After the German invasion of the Low Countries in the spring of 1940, the family fled Belgium across the French border. They lived in France and Portugal for 6 months until they could obtain visas to immigrate to the United States, arriving November 1940. One benefit of this early multicultural experience was Dr. Rayport's fluency in Russian, German, French, Flemish, and English. He continued his education first at NYU and then at Earlham College, from which he was graduated in 1943. He then worked with Simon Komarov, an intellectual grandson of Pavlov, in the Fells Laboratory in Philadelphia. There Dr. Rayport performed the



FIG. 1. Picture taken by Beverly Hall, on Nantucket, September 1997, the occasion was Mark Rayport's 75th birthday.

experiments that formed the basis for the Shay rat model of gastric ulcer pathogenesis (22). Komarov encouraged him to apply to McGill University for medical school; he matriculated in 1944, graduating in 1948. Inspired by lectures at the Montreal Neurological Institute, he developed a passion for the study of the nervous system and decided on a career in neurosurgery. He did an internship and medicine and neurology residencies at Bellevue Hospital (on the Cornell Division) in New York. In his last year at Bellevue, he married his wife, Dr. Ferguson. He then entered the U.S. Public Health Service and was assigned to the Lexington, Kentucky, USPHS Hospital for research and treatment of drug addiction.

Dr. Rayport returned to Montreal for neurosurgical residency training at the Montreal Neurological Institute, where he was the last of Wilder Penfield's residents. He obtained his Ph.D. in neurophysiology in the laboratory of Dr. Herbert Jasper. In 1958, he was appointed to the faculty of the Albert Einstein College of Medicine under Dr. Leo Davidoff, then chair of Neurosurgery. During his 10 years there, Dr. Rayport directed a research laboratory, established a multidisciplinary epilepsy surgery program, and was an active and valued teacher. In 1966 and in 1967 through 1968, he took sabbatical leave as Visiting Professor at the Laboratoire de Neurophysiologie Comparée, Faculté des Sciences, Université de Paris, France, with Professors Pierre Buser, Jean Bancaud, and Jean Talairach. In 1968, he organized a Festschrift at the New York Academy of Medicine to honor Dr. Davidoff at his retirement (30).

In 1968, he joined the Mt. Zion Neurological Institute in San Francisco, but after 1 year, was invited to join the faculty of the newly established Medical College of Ohio as Professor and founding Chair of the Department of Neurological Surgery. He played key roles in establishing the Comprehensive Epilepsy Program and the Neurosciences program at the Medical College of Ohio. He was recognized in 1987 as the "Ohio Neurosurgeon of the Year" by the Ohio State Neurosurgical Association. He also served as President of the Toledo Neurological Society, and founded the MCO chapter of AOA. In 2001, he and his wife established the Mark and Shirley Ferguson Rayport Fund for Brain Behavior Research in the Medical College of Ohio Foundation. His efforts on behalf of community service were exemplary. Outside his profession, Dr. Rayport was an avid photographer, traveler, chef, and aficionado of the arts and fine books.

He is survived by his wife, Dr. Shirley Ferguson, now Professor Emerita of Psychiatry at the Medical College of Ohio, and their three children. Stephen Rayport, M.D., Ph.D., is on the Psychiatry faculty at the Columbia University College of Physicians & Surgeons. He and his wife Marcia have two daughters, Ilana and Yael. Jeffrey Rayport, Ph.D., is currently CEO of Marketspace LLC, a busi-

ness advisory firm. Jennifer Rayport Rabodzeenko is a partner with her husband in a video-production company. They have one son, Blake.

Dr. Rayport believed in the care of the whole patient, generous sharing of knowledge, academic excellence, and the beauty of the order of nature. His integrity, loyalty, devotion to family, insightful perspectives, and openness to new ideas will be sorely missed.

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