



Obituary

In Memoriam Arie (Arik) Gilai

Clinical Neurophysiologist, scientist, humanist and friend, June 16, 1938–March 9, 2013



Arie Gilai or “Arik” as he was called by everyone who knew him, was born and died in Jerusalem, his beloved city. He was born when Jerusalem was under a British Mandate. Following elementary high school and military service as a paratrooper, he completed his B.Sc. and M.Sc. studies in the Hebrew University of Jerusalem. In 1974 he received the Ph.D. degree and then traveled to US to spend 2 years with Prof. Nakajima in Purdue University in Indiana, in the fields of electrophysiology & biophysics. Upon his return to Israel, he became very active in clinical neurophysiology at the Shaare Zedek Medical Center and the “Alyn” hospital which was then the only Pediatric and Adolescence Rehabilitation Center in Israel. His research and clinical activities included investigation of neuromuscular function and establishing electrophysiological criteria of nerve and muscle dysfunction for clinical diagnosis. His work focused on the biophysical and neurophysiological properties of the neuromuscular systems such as the passive and active electrical properties of the surface and T-system membranes; evoked potentials of peripheral and central nervous system in demyelinating disorders; quantitative EMG and single fiber EMG in myopathic and neurogenic disorders; evaluation of drug efficacy and site of action; isotonic and isometric mechanical properties of skeletal muscle; ultrastructure of skeletal muscles and the synaptic region; design and development of computerized medical equipment for routine diagnosis and therapeutic use. He also developed a computerized program for calculating a mean motor action potential from a short burst of muscle activity obtained from a crying young infant in whom voluntary muscles activity cannot be obtained at will. These

research and clinical activities impacted clinical practice not only by teaching young neurophysiologists but also by prolific publishing in this field, initially with his mentors and then with colleagues and students, himself serving as their mentor.

Arik was the chairman of the Israeli Society of Clinical Neurophysiology during the years 1988–1993. In 1989 he succeeded in bringing to Israel the IX International Congress of EMG and Clinical Neurophysiology which was scheduled for 1991. The first Gulf war prompted the international federation of clinical neurophysiology to look for an alternative venue, but Arik together with the members of the local organizing committee succeeded in postponing the congress but keeping it in the same venue, and Arik chaired this successful congress in Jerusalem in 1992.

Arik was a wonderful colleague. His broad smile and his gentle easy way with sick and terrified children undergoing painful electrophysiological studies, made the experience of undergoing tests much more tolerable for the young patients and their parents. Arik was creative in finding ways to improve the quality and significance of neurophysiological testing when computerized EMG was just emerging, replacing cumbersome manual analysis of long strips of EMG. His scientific achievements were well known internationally leading to his nomination to act as an active member of organizing committees for international congresses for EMG and computerized EMG. His nominations for chairman of the International Committee for the proposition of standardized terminology and criteria for EMG analysis in 1988 and his election to the position of president of the International Society for Computerized EMG during the years 1993–1998 are just reminders of the worldwide recognition of his expertise in this field of clinical neurophysiology.

Arik was not only a scientist. He dedicated much of his time to collecting walking canes and old medical instruments which were found and purchased during numerous trips around the globe. Some of those were displayed in small but popular museum in Jerusalem. He also documented meticulously the history of 5 generations of his family in Jerusalem as well as building a comprehensive internet site dedicated to the history of the Israeli Paratrooper corp.

His wife Ruthie, his children and grandchildren and his many friends and colleagues in Israel and abroad will miss his warmth and keen friendship.

On behalf of the members of the Israel Society for Clinical Neurophysiology,

N. Gadoth MD – Chairman
H. Pratt Ph.D. – Treasurer
H. Sohmer Ph.D. – Secretary.

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Available online 3 May 2013