Commentary: David Kupfer, Ph.D., 1925–2004

Dr. David Kupfer of Worcester, Massachusetts died on December 11, 2004, at the age of 79. The cause of death was a heart attack.

Dr. Kupfer was born in Warsaw, Poland, in 1925 to Zalman and Malka Kupfer. In 1933 Zalman moved to Palestine, and in 1934 Malka, David, and his brother, Moshe (Mike), joined him in Tel Aviv. In the 6th grade, David won the all-city Bible contest (for 6th to 8th graders). When he turned 13, he joined the youth division of the Hagana (the Jewish underground fighting the British to be able to bring refugees from Europe to Israel). He subsequently entered the Hagana Units called Hish Tel-Aviv, under the leadership of ‘Chera,’ the man who later became chief of the Israeli Defense Forces. He received a High School Equivalency diploma while working full time as a diamond cutter in Tel Aviv. He enrolled at the University of California in Berkeley, but returned to Israel to serve in the War of Independence (Medical Corps). He returned to the University of California, Los Angeles, to continue his education and earned a B.A. degree in Chemistry and Zoology in 1952. He enrolled in the Ph.D. program at UCLA, where he earned the Ph.D. degree in Biochemistry in 1958, training under Dr. Dan Atkinson. Dr. Kupfer went to the Worcester Foundation for Experimental Biology for postdoctoral studies on steroid synthesis and metabolism with Dr. Ralph Dorfman (1958–1960), and it was a very productive period of his career. He then went to the Weizmann Institute of Science in Rehovoth, Israel, where he studied protein synthesis in bacteria with Dr. David Elson (1960–1962). He returned to the U.S. in 1962, taking a position of Group Leader in Lederle Laboratories, rising to Senior Scientist and Group Leader by 1965 where, until 1971, he directed research on the induction and inhibition of monoxygenases with respect to modulation of steroid metabolism and function.

It was during this period that he began the studies that were to echo throughout his research career: modulation of steroid and prostaglandin actions by monoxygenase metabolism. Dr. Kupfer was a very busy scientist and published extensively during this period with Lederle. During the latter period at Lederle, his interests turned to the cytochrome P450 monoxygenases, and in 1969 he took a half-year Sabbatical in Sweden, working with Drs. Lars Ernster and Sten Orenius at the University of Stockholm, Department of Biochemistry. In 1971, Dr. Kupfer returned to the Worcester Foundation for Experimental Biology as a Senior Scientist, where he continued to build upon his growing reputation in studies on the constitutive substrates of the cytochrome P450 enzymes, the role of metabolites such as 19-hydroxyprostaglandins, steroid hormone receptors, and estrogenic environmental pollutants. In 1993 he was promoted to Principal Scientist at the Foundation. In 1997, after incorporation of the Worcester Foundation into the University of Massachusetts, he became a Professor of Pharmacology and Molecular Toxicology at the University of Massachusetts Medical Center in Worcester, and later a Professor of the newly formed Department of Biochemistry and Molecular Pharmacology.

During his long career as a researcher at the Worcester Foundation and University of Massachusetts, Dr. Kupfer was continuously funded by research grants from the National Institutes of Health, a span of over 30 years. Over this period, his publication list exceeded 150 scientific reports. He was the thesis advisor for 7 Ph.D. candidates, with students enrolled at Clark University and at Worcester Polytechnic Institute. He was frequently called upon as external reviewer for Ph.D. defenses at a number of institutions, including Dartmouth College, Woods Hole Oceanographic Institute, and the Worcester Polytechnic Institute-Worcester Foundation for Experimental Biology consortium. He served as Chairman and Co-Chairman on a number of FASEB symposia.

Dr. Kupfer was also heavily involved in service to the scientific community. He served as Science Lecture Committee Chairman at Lederle; was Representative at large for the American Chemical Society of Central Massachusetts; served as a member of the Executive Committee of the Drug Metabolism Division of ASPET; was a member of the NY State Regents Doctoral Evaluation Project, site-visiting doctoral programs at Cornell University; and Chaired the Nominating Committee for the Executive Committee of the Drug Metabolism Division of ASPET. His service to the scientific community includes membership on the editorial boards of at least 4 journals. He served as a member of the editorial board of Drug Metabolism and Disposition from 1973 to 1980, and was Associate Editor of this journal from 1980 to 1982. He was Associate Editor of the International Encyclopedia of Pharmacology and Therapeutics, Drug Metabolism Section, from 1976 to 1981. He was Associate Editor of the journal Pharmacology and Therapeutics from 1991 to 1993. He served as Field Editor of the Journal of Pharmacology and Experimental Therapeutics from 1995 to 1998, and was a member of the editorial board of the Journal of Pharmacy and Pharmaceutical Sciences since 1997. He was a member of ASPET, ASBMB, and ISSX.

Dr. Kupfer’s scientific expertise was frequently called upon by NIH review committees. He was a member of the Pharmacology Study Section from 1975 through 1977, served as a member of a site-visited team of an ad hoc study section in 1978, and was a member of several Special Study Sections from 1983 to 1992. Although asked to become a member of the Toxicology Study Section in 1993, he had to respectfully decline, in order to focus more on his own studies. Dr. Kupfer met his wife of 43 years, the former Barbara J. Wolff, in Worcester, MA, and married her while at the Weizmann Institute in 1961–1962—the first couple to be married on the grounds of the Institute. He is survived by his wife, his three daughters: Sharon Roberts and son-in-law Russell Roberts; Dahlia Kupfer and son-in-law Stuart Hirshfeld; and Tamara Kupfer and son-in-law Andrew Sirulnik. He leaves eight grandchildren, Yael, Ezra, Aryeh, and Zev Roberts; Eli and Anya Kupfer-Hirshfeld; and Benjamin and Eve Sirulnik.

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