

In Memoriam

Charles E. Kolb
May 21, 1945 - January 5, 2020

By Craig Kolb and Amy Kolb Noyes



Charles E. Kolb, Jr., known as Chuck to friends, family, and colleagues, died peacefully on Sunday, January 5, 2020, after a short illness.

Chuck was born May 21, 1945 in Cumberland, Md. to Doris McFarland Kolb and Charles E. Kolb, Sr. Growing up in the Allegheny Mountains, he developed a love of the outdoors, canoeing and camping with the Boy Scouts, running cross country, playing tennis, and working summers on his grandparents' farm on Martin's Mountain. He was also inspired at a young age by the scientists who worked with his father at Allegheny Ballistics Laboratory, designing and testing missiles for the Navy. Together, these interests would shape his future career.

After earning the rank of Eagle Scout and graduating from Allegheny County High School, he left Appalachia in 1963 to attend MIT. As an undergraduate, he was a reporter, and ultimately editor, of The Tech newspaper, and received the University's highest student

honor for his journalism. He earned his S.B. in Chemistry in 1967, and an M.A. and Ph.D. in Physical Chemistry from Princeton University.

He married his high school sweetheart, Susan Foote, on August 21, 1965. By 1971 he had two children, a newly-minted Ph.D., and a job at Aerodyne Research, Inc. as a Senior Research Scientist. In 1973, he and Sue settled in Sudbury, Mass. to raise their family.

Chuck became President and CEO of Aerodyne in 1985. Over the next 35 years, he led it to become a prominent research institution specializing in atmospheric chemistry, air quality, and climate. Aerodyne is a private company that functions, unusually, as a research institution, working in conjunction with public agencies, private industry, and academia.

He was a hands-on leader and a practicing scientist, with extensive expertise in atmospheric and environmental chemistry, combustion chemistry, chemical lasers, materials chemistry, and the chemical physics of rocket and aircraft exhaust plumes.

His early work on detecting missiles from their atmospheric chemical trails led to his development of models to assess how aerospace systems affect the chemical structure of the upper atmosphere. He later initiated Aerodyne's programs to develop novel techniques and instruments to identify and measure gasses and other particles that lead, directly and indirectly, to air and soil pollution.

These programs ultimately resulted in the creation of the Aerodyne Mobile Laboratory, a van packed with instruments capable of measuring low concentrations of a variety of pollutants. The mobile lab allows for realtime mapping and tracking of pollution sources, and Chuck oversaw its deployment across North America on a variety of missions, including locating and measuring methane leaks from natural gas pipelines, emissions from forest fires, and jet engine pollution at airports.

Chuck saw science as a universal language and a diplomatic tool. He sought out opportunities to work with scientists from around the world as a means of building bridges and furthering mutual understanding. He worked with an international team of scientists as a member of the MILAGRO project, studying air pollution issues in Mexico City, and was a director of the Malta Conferences Foundation, which brings together scientists to help solve scientific and technical challenges in the Middle East.

Chuck had a lifelong interest in helping young chemists at the start of their careers. He initiated ACCESS, Atmospheric Chemistry Colloquium for Emerging Senior Scientists, a biennial program which brings together new PhDs with peers and program managers at

major federal research agencies in order to forge professional relationships. The program has run since 1991 and has had a significant impact on the careers of its hundreds of participants.

Chuck considered service a personal responsibility. He served as editor and on the editorial advisory board of several journals, and as an advisor to academic institutions. He also served on numerous scientific committees and advisory boards dealing with atmospheric and environmental chemistry issues, including those for NASA, the National Research Council, and the National Academy of Science, on subjects ranging from the impact of rocket launches on the upper atmosphere to disposal of stockpiled chemical weapons.

He was the recipient of numerous industry awards and academic recognitions, a member of the National Academy of Engineering, and a fellow of the American Physical Society, the American Geophysical Union, the American Association for the Advancement of Science, and the Optical Society of America. He has more than 250 peer-reviewed publications to his name.

Chuck loved his work, spending time with his family, running, tennis, weekends on Cape Cod, old school jazz, and lightly seared tuna steaks. He was a natural and enthusiastic teacher, able to break down complex topics for a lay audience. His keen intellect, thoughtful leadership, steadfast friendship, and fundamental kindness will be missed.

He was predeceased by his wife in 2009. He is survived by his son, Craig Kolb (Corey Keller) of Oakland, Ca.; his daughter, Amy Kolb Noyes (Dan Noyes) of Wolcott, Vt.; sister Dr. Susan Kolb of Dunwoody, Ga.; and grandchildren Adriana Noyes, Ian Noyes, Zoë Kolb, and Theo Kolb.

A celebration of Chuck's life will be held at Cafe Escadrille, in Burlington, Ma., on February 15, 2020, from 3 to 5 pm. Please visit www.charleskolb.org/memorial for full details, and to RSVP.

Chuck's family and colleagues are establishing the Charles E. Kolb Lectureship to honor his contributions to atmospheric and environmental chemistry. More information on the lectureship, including how to support it, can be found by visiting www.charleskolb.org/lectureship.

