



Orlando Jack Miller M.D. (1927 – 2024)

Orlando Jack Miller, Emeritus Professor of Molecular Medicine & Genetics at Wayne State University in Detroit, died after a short illness on November 3, 2024 in the Adler Hospice Center in Aldie, VA, surrounded by loved ones. Jack was born on May 11, 1927 in Oklahoma City to Iduma Doris Miller (*née* Berry) and Arthur Leroy Miller, and graduated from Central High School in 1943. He received B.S. and M.D. degrees at Yale, and had a four-year residency in obstetrics and gynecology there, after interning at St. Luke's Hospital in Oklahoma City and serving two years (1951-53) as a jump doctor in the U.S. Army's 11th Airborne Division.

Jack chose medical genetics as his area of research, and trained with Lionel Penrose at the Galton Laboratory in University College, London, 1958-60. In collaboration with Charles Ford, Jack and Professor Penrose discovered the presence of two extra chromosomes, producing XXY and 21-trisomy in a man with both Klinefelter syndrome and Down syndrome. They discovered the presence of two X and two Y chromosomes in each cell in another man with Klinefelter syndrome. Jack showed the presence of tumor suppressor genes in mouse/human hybrids while working with Henry Harris at Oxford University.

Jack spent 26 years at Columbia University, where he became Professor of Ob/Gyn and of Human Genetics & Development. His primary focus was genetic research, which was supported by grants from the March of Dimes, the NYC Health Research Council, the National Institutes of Health, and the American Cancer Society. He carried out studies on chromosome organization, evolution, and gene content, in addition to clinical studies focused on identifying causes of infertility and mental retardation. His discovery that Caspersson's quinacrine banding technique could be used to identify individual mouse chromosomes opened the door to the development of mouse models of human diseases, and facilitated the work of other researchers developing treatment methods. Jack also taught medical genetics and served on the editorial boards of nine scientific journals and on research grant committees. He was the second President of the American Board of Medical Genetics, and was a member of the first Genome Study Section of the National Institutes of Health. After leaving Columbia, he served as founding Chairman of

Molecular Biology and Genetics at Wayne State University School of Medicine, where he spent 11 years. Jack published more than 250 scientific papers, many in such leading journals as *Science*, *Nature*, and *Cell*, and he wrote the fourth edition of *Human Chromosomes*. He traveled extensively professionally, including sabbaticals in Oxford with Henry Harris, Edinburgh with Adrian Bird, and Melbourne with Jenny Graves, as well as international conferences throughout the world. He is listed in Marquis Who's Who.

Jack and his wife Anne (Sandy) did research together until their retirement in 1996. They traveled widely, visiting more than 45 countries on all seven continents, and enjoyed conducting genealogical research excursions at home and abroad. They lived in Lansdowne Woods, Leesburg, VA, for 19 years, where Jack was active in the Library Chat Group and the Torch Club, and enjoyed walking outdoors, doing crossword and jigsaw puzzles, reading, and composing his memoirs.

Jack was predeceased by his twin sister Miriam and older brother William, an orthopedic surgeon in Oklahoma City. He is survived by his wife of 70 years, Anne (Smith) Miller, and their three children, Richard (Kristal), Cynthia (Matt), and Karen, and seven grandchildren.

A memorial service will be held Tuesday, Dec 3 at 2:00 pm in the Clubhouse Auditorium at Lansdowne Woods. In lieu of flowers, memorial contributions may be made to the American Association for the Advancement of Science (AAAS.org).