



# John Douglas Crawford



John “Jack” Douglas Crawford, II, had a stroke during the night after his 85th birthday on April 16th, 2005, and died three days later. Jack was known to many as one of the founders of pediatric endocrinology, as well as the developer of the electronic osmometer, and to his children and the neighborhood children in Lincoln, MA as the man who let them collect eggs and feed the geese.

Jack was born in 1920 at the MGH as the middle child to Sallie Ward Crawford and Seth Turner Crawford. He grew up in Randolph, MA, and Beacon Hill in Boston and spent summers in Westport, MA. As a boy, he was fascinated by moths and butterflies. He came to know Carroll Williams, an entomologist, and initially chose entomology as his career. However, Jack recalled that his father insisted: “you can’t make a living on bugs”. Carroll Williams decided to go to medical school and so, Jack did, as well. Jack noted recently that “Carroll went back to bugs and made far more money in entomology than I ever did in medicine”.

Jack entered Harvard College in 1938, while World War II was raging in Europe. Jack was a member of the ski team. With his future brother-in-law, Thomas Winship, and other friends, Jack helped to build the Harvard Ski Cabin, which is still in use in Jackson, NH, and founded the Drifters Ski Club. He studied biology and literature and did research at the Marine Biology Laboratory at Woods Hole. He published abstracts in 1938, 1939 and 1940 in the *Biological Bulletin* (e.g. 77:315, 1939) with Albert Navez and Richard Foster which concerned factors that affected the heart rhythm in *Venus Mercenaria* (a clam). Venus is hermaphroditic, and may undergo spontaneous sex reversal; some have theorized that Jack’s early experience with Venus may have been the origin of his later medical interest in sexual ambiguity.

Because of the demand for more physicians after the U.S. entered the War, Jack was recruited to enter Harvard Medical School in 1941. While a medical student, he volunteered at MGH to help with the care of the victims of the Coconut Grove Nightclub fire on November 28, 1942. This experience introduced him

to Oliver Cope, Bradford Cannon, Eric Lindemann and many other staff members at MGH who were involved in this heroic effort to treat hundreds of victims of severe burns. These surgeons, psychiatrists and others developed many new innovative approaches to improve the care and prognosis of burn victims and influenced Jack's future as well.

In 1944, Jack graduated from HMS. While on leave from the U.S. Army in 1945 and 1946, he completed an internship and residency in pediatrics at MGH. In 1946, he was sent to Berlin where he was a liaison medical officer of the Office of Military Government and Chief of the Diphtheria Ward of the 279th Station Hospital. During his two years in Berlin, Jack recalled later that the German patients were so undernourished and sick with infection that it was difficult to keep them alive. He witnessed more deaths during those two years in postwar Germany than he did in his subsequent 60 years of practice at MGH.

Jack's time in Germany was marked by two life-changing events. He had gone to Germany without his wife of three years, Caroline Smith, who had given birth to their daughter Margo just after Jack had left Boston. When Margo was two months old, mother and daughter set out to join Jack in Germany, but died when their plane crashed in Newfoundland. Jack never met his daughter. A medical tragedy followed this personal tragedy. Jack had symptoms of arthritis in his right knee, which was diagnosed incorrectly as a symptom of tuberculosis. He was treated with the potent new antibiotic streptomycin, but at too high a dose. This caused permanent damage to Jack's inner ear and the loss of his vestibular sense of balance. To his credit, Jack later published a description of this experience in "Living without a balancing mechanism", in the *New England Journal of Medicine* 1952; 246:458-460, which was signed "JC in Boston". Using vision, Jack compensated for his loss of balance to a degree that exceeded the expectations of his doctors.

After returning to Boston in 1947, Jack began courting Joanna Winship of Sudbury, MA. Joanna was the daughter of the then Editor of the *Boston Globe*, Laurence L. Winship, and sister of future editor Thomas Winship. Jack and Joanna were married at the Winship home in Sudbury in 1949, and the first of their three children was born a year later. Their three children are: Becky, Tom and Jud. The Crawfords raised their family in Lincoln, MA. Jack relished splitting wood, maintaining his barnyard animals, and was an accomplished gardener, with bountiful vegetable and flower gardens. He enjoyed music, tennis, skiing, sailing and kayaking with his family. He loved dearly his three grandchildren Phelps (Tracy), Katie (Crawford) and Jake (Crawford), who delighted, like the neighborhood children and visitors, in his flock of geese and laying hens.

Jack had come to MGH for his training in Pediatrics because of Allan Butler, who had been recruited by his collaborator Fuller Albright and others to reinvigorate the Department of Pediatrics at MGH. Butler and his mentor, James Gamble at Children's Hospital, had been carrying out "seawater studies" during World War II, with the goal of developing rations to enable more seamen to survive after their ships had been torpedoed. When he returned from his military service, Dr. Butler gave Jack responsibilities in the pediatric department's laboratory; Jack was also Chief Resident in Pediatrics. Jack was interested in the tonicity of fluids and wanted a better instrument to measure the osmolality of urine. He teamed with Arnold Nicosia, a resident in pediatrics, and Henry Meadow, the Dean of Financial Affairs at HMS, to put together the first electronic osmometer. Their design is still in use.

While Chief Resident, Jack was asked to be a co-author, along with Nathan Talbot, Janet McArthur and Edna Sobel, of the second textbook in pediatric endocrinology. He began his work in endocrinology

after his residency ended. Jack became the Chief of the Pediatric Endocrine Unit of the Children's Service at MGH in 1963, when Nate Talbot became the Chief of the Pediatric Service. He went on to become a member of the Endocrine Society in 1967. In 1971, he was one of the founders of the new national organization, the Lawson Wilkins Pediatric Endocrine Society and served as President in 1977-78. He was proud of the creativity and accomplishments of his many fellows during his tenure as Unit Chief from 1963 until 1990. Many became outstanding directors of pediatric endocrine programs throughout the U.S., Canada, Israel and other countries. An incomplete list of his fellows and staff colleagues includes: Alia Antoon, June Apprille, Mary Arnold, Christos Bartsocas, Barry Bercu, William Bergstrom, Hans Bode, Paul Boepple, Marco Danon, Lytt Gardner, Alberto Hayek, John Herrin, Don Hillman, Lewis Holmes, Gerald Kerrigan, Zvi Laron, Rudolph Leibel, Charles Lowe, Margaret MacGillivray, Olcay Neyzi, Claude Raynaud, Robert Ritchie, Scott Rivkees, William Russell, Krishna Saxena, Edgar Schoen, Mary Scott, Boris Senior, Juan Sotos, Lester Soyka, Marcus Vest, Dorothy Villee, and Alan Ziskind. In addition, there were many medical students and residents in pediatrics who knew Jack as a teaching mentor, friend and very supportive role model.

In 1957-58, Jack took a sabbatical at Cambridge University in England, where he worked in the Laboratory of Experimental Medicine, headed then by R. A. McCance and Elsie Widdowson. He worked on electrophysiology with Andrew Huxley, who was also a neighbor in the village of Grantchester where their children went to the village school together and their families remained good friends thereafter. Huxley shared with Allen Hodgkin a Nobel Prize in 1963 for his biophysical studies of the action potential in squid.

His many research studies in clinical endocrinology focused on disorders of sexual development (particularly in collaboration with Hardy Hendren and Patricia Donahoe in Pediatric Surgery), diabetes insipidus, hormonal control of growth, and kidney function. He and Gordon Kennedy were among the first investigators to publish the effectiveness of chlorothiazide as a treatment for the symptoms of diabetes insipidus (*Nature* 183:891-892, 1959). Later, Hans Bode and Jack presented convincing evidence of the X-linked inheritance of nephrogenic diabetes insipidus among the descendants of settlers who had arrived in 1761 in Halifax aboard the ship Hopewell, also called the Hopewell Hypothesis (*N Engl J Med* 280:750-754, 1969). He was also a pioneer in the use of radiation therapy to treat hyperthyroidism in children. Jack worked closely with John Crigler, Bill Crowley and Paul Boepple (with periodic input from Jim Tanner and Bob Blizzard) to evaluate the innovative new treatment of precocious puberty with agonists of GnRH, which remains the preferred treatment 25 years later. Jack was also effective in defending this treatment when the FDA was receiving criticisms of this new approach. One innovative project that relied heavily on Jack's clinical skill in the diagnosis of the Prader-Willi Syndrome was his collaboration with the Baylor graduate student David Ledbetter and his young faculty mentor Vic Riccardi in Houston, who had known Jack when he trained in genetics at MGH. Using coded blood samples which Jack obtained from his affected patients and controls in Boston, they reported the association of a subtle deletion in chromosome 15 in individuals with the Prader-Willi Syndrome (*N Engl J Med* 304:325-329, 1981).

When asked in 2003 about his most notable accomplishments and colleagues, he described his work in developing the osmometer and later, the development of better methods for managing the fluid and electrolyte needs of children with extensive burns. Jack was one of the early proponents of an affiliation of MGH with the new Shriners Burns Institute (SBI) in 1962. He was the Director of Pediatrics at SBI from its opening in 1967 through 1986. Jack, John Herrin, Jack Burke and many other creative surgeons, infectious disease specialists and psychiatrists developed new ways to save lives after the

acute injuries and to rehabilitate the children thereafter. Jack was also very effective in promoting fire prevention and safety as a public health approach to this common, very serious problem.

Jack remained a biologist and a clinician throughout his career. He had an amazing breadth in his areas of clinical interest and expertise. Jack evaluated, diagnosed and treated hundreds of sick infants and children with a wide array of endocrine, renal and metabolic disorders for 60 years at MGH. He had the remarkable capacity to combine thoughtful scholarship with sincere compassion in his medical care. When he “retired” in 1986, funds were provided by parents, patients and colleagues to establish the annual John D. Crawford Lecture at MGH. He received many wonderful tributes from his patients and their parents. Some examples were: “He personifies for us all that is good in the world”. “. . . I am not only losing a great doctor, but also someone who has been a big factor in my life for nearly fifteen years . . . You have always made me feel I could do anything . . .” “Thank you for coming to the Sunday brunch . . . you’ve given me the greatest present of my life. Thank you for staying with me every step of the way . . .” The eulogy from the current chief of pediatrics, R. Alan B. Ezekowitz, MB, ChB, DPhil, at the Mass General Hospital for Children summarized well the sentiments of Jack’s many colleagues, friends and admirers: “Dr. Crawford was the quintessential pediatrician and scientist. His incredible intellect, warm sense of humor and great humanity inspired respect, admiration and adoration among colleagues, families and especially the children who were his patients.”

Jack received many awards and honors. He was particularly pleased to receive honorary degrees from the Catholic University of Santiago, Guayaquil, Ecuador in 1971 and the National University of Athens in 1997.

In his 80’s, Jack decided not to take new patients and to drop out of the night and week-end call schedule. He continued to arrive at the hospital at 7:00 a.m. each day. When he died, he was writing a summary of the history of pediatrics at MGH. He attended regularly Morning Report with the Residents in Pediatrics, who serenaded him on the eve of his 85th birthday.

Respectfully submitted,

Lewis Holmes, *Chair*

Mary Arnold

John Crawford III

John Crigler

Lynne Levitsky