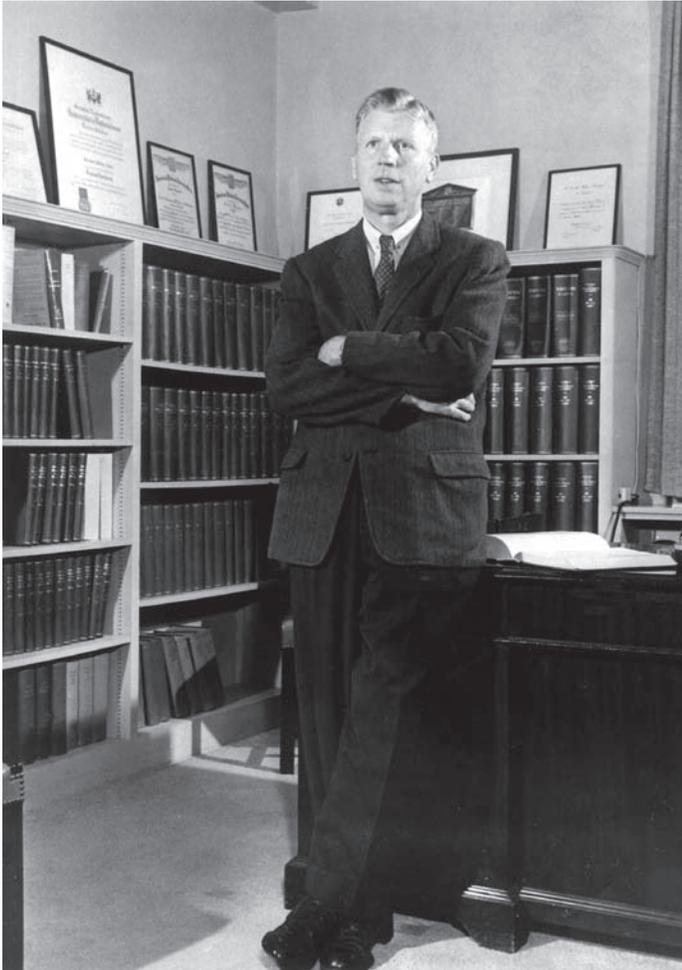




George Widmer Thorn



George Widmer Thorn (GWT) was born in Buffalo, NY, January 15, 1906. He was the son of George W. and Fanny Widmer Thorn. The Thorns were of German and the Widmers of Swiss descent, both families arriving in upper New York State in the 1840's. George senior was involved in the food industry and retired early at the height of the depression. However, in 1923 he was able to send GWT, age 17, to Wooster College, Ohio. Previously, young GWT, age 15, contracted with town officers at Keuka Lake, where his family had a summer cottage, and hand-dug a mile-long water ditch. He was already exhibiting industry and persistence! Mrs. Thorn, a superb musician, was a dominant lady in Buffalo, active in church, the temperance movement and other civic affairs. GWT's sister, Catherine, also a musician, received a PhD in speech therapy. Thus our GWT grew up in a sophisticated and vibrant household.

After two years at Wooster, GWT left for the University at Buffalo School of Medicine. In his 2nd year he began to work with Frank Hartman in the Department of Physiology, and by his senior

year, had prepared an adrenal extract which maintained normal growth in adrenalectomized rats. After a year as House Officer at Millard Fillmore Hospital, he became Research Fellow in Physiology with Dr. Hartman and prepared the first adrenal extracts for potential human use. He also went into private practice, but continued his research relationship with Hartman, who subsequently moved to Ohio State. In 1932 the two were awarded the Gold Medal of the American Medical Association. GWT again received the Medal in 1939 for his subsequent seminal research in adrenal physiology and disease.

Alan Gregg, who was then head of the Rockefeller Foundation, heard of the precocious researcher in Buffalo and awarded him a 3-year fellowship starting with a year at the Massachusetts General Hospital.

*In tribute to their dedicated efforts to science and medicine, deceased members of the Harvard Faculty of Medicine (those at the rank of full or emeritus professor) receive a review of their life and contributions with a complete reflection, a **Memorial Minute**.*

1934-5 was spent on Ward 4 with Means, Aub, Bauer, Albright and other luminaries, followed by a year back with Hartman at Ohio State. In 1931 he had married Doris Weston Huggins, who literally joined his research efforts as a talented technician, analyzing urinary electrolytes by the then-laborious chemical means as well as serving as a normal subject for several protocols involving hormone/electrolyte relationships. The Thorns traveled to Baltimore to finish his final Rockefeller fellowship year and in 1938 he was appointed Reed Ellsworth Fellow and Associate Professor of Medicine and Associate Physician at Johns Hopkins University.

This was an explosive period in knowledge of adrenal physiology and pathology. Desoxycorticosterone (DOC) had become available as implanted pellets to enable Addisonian patients to maintain sodium balance. With too much DOC the subject developed high blood pressure, hypokalemia and alkalosis. A new syndrome was described occurring either iatrogenically or spontaneously with adrenal hyperplasia or tumors. With Lewis Engle and others, it was shown that the primary non-electrolyte effect was in intermediary metabolism, namely, the "glucocorticoid" component. Likewise, the metabolic parameters of classical Cushing's disease were clarified. Nobelist Edward Kendall, a decade earlier while vacationing in upper New York, had a brief summer illness treated by a young reddish-haired 2nd year med student, GWT. Dr. Kendall subsequently provided the first synthetic glucocorticoids to GWT and later both synthetically pure cortisone and hydrocortisone.

In 1942, the Peter Bent Brigham Hospital's brilliant young Chief of Medicine, Soma Weiss, died suddenly. Many of its staff, Stead, Beeson, Myers, Hickam, Romano and others had departed to other institutions. The war was on and younger members left for military service. GWT was a major in the army medical corps, but when the call came from Harvard and the Brigham, he was discharged, and four days after his last lecture at Hopkins he was introduced to the Brigham. That year the medical staff was GWT, Sam Levine, Lewis Dexter, Charles Janeway, James P. O'Hare and one or two senior residents. They were very busy!

Research efforts were directed to both renal, adrenal pathophysiology and also to anoxia, stress and nutrition. One striking event was the vascular attachment of a kidney obtained from a just-deceased heart patient of Dr. Levine. On GWT's recommendation, it was placed by a surgical resident, Charles Hufnagel, externally on the forearm of a young lady from the Lying-in Hospital with renal shutdown and severe uremia. It produced only very small amounts of urine, but the patient did recover.

Another major advance was related to the adrenal gland. The Armour Company had prepared ACTH, and in 1946, Peter Forsham and GWT reported the use of ACTH in the diagnosis of adrenal diseases. It was first noticed to increase urinary uric acid and to lower lymphocytes. One of the Brigham residents, Clement Finch, suggested looking at eosinophils and thus appeared the standard "eo-test" for glucocorticoid response. Thorn, Prunty and Forsham later reported in Science in 1947 the determination of urinary glucocorticoids after ACTH administration as the then optimal quantitative assessment of adrenal function.

Next, a young cardiology fellow, John Merrill, was induced by GWT to meet with the Dutch physician, Willem Kolff, who came to the Brigham and discussed renal dialysis. With engineering assistance from

Dr. Carl Walter and the help of a bright young Harvard medical student, Holly Smith, apparatus was assembled and so started renal dialysis in America.

In the 1950's the Brigham was the world center for the study of adrenal disease. The Reddy-Thorn determination of urinary hydroxysteroids was the standard. Adrenalectomy for prostate and other sex-hormone related malignancies had been standardized by Dr. Charles Huggins of Chicago and Dr. Hartwell Harrison at the Brigham. Also, numbers of patients began to arrive from the US and abroad: King Ibn Saud, Robert Frost, Spencer Tracy, Judy Garland. On one occasion, a notable asked the ward nurse when Professor Thorn would see him, having only had a very young-looking charming house-officer talk to him about his problems earlier that morning. Obviously, GWT!

As the Brigham grew, it became apparent to GWT that patient care, particularly in the Out-Patient Department was far from optimal, and patients were clumsily referred to specialty groups and subsequently returned to the primary physician. Thus he started the "General Medical Clinic" which had a member of each major medical specialty, some senior, some junior, so consultations could be made "down the hall", a far more efficient and educational process. There was some discontent amongst the heads of the divisions, as might be expected. This preceded by a decade the whole concept of a medical "generalist". Thus was initiated a totally new approach to out-patient care in an academic setting.

Dr. Verne Mason of the University of Southern California, who was a Johns Hopkins graduate and knew GWT, had been personal physician to Howard Hughes for several decades. He discussed the possibility of Mr. Hughes placing some of his wealth into medical research and this was accelerated by Hughes' near death in a plane crash in 1946. In early 1953, the three, Mason, Hughes and GWT, met to discuss the formation of a "Medical Institute". On Dec 17, 1953, Mr. Hughes gave the Hughes Aircraft Company to the Howard Hughes Medical Institute (HHMI) with himself as sole Trustee. In 1954, he met with Drs. Herman Weiskotten, Verne Mason and GWT and these formed, with Hugh Morgan, the first Medical Advisory Board. The Institute applied to the IRS for non-profit tax exemption, and was denied, starting a 2-decade series of problems for HHMI, in which the personality, integrity and stature of GWT played a major role in the existence and growth of the Institute. Exemption was granted in 1957 by the IRS but the problem reappeared after the death of Mr. Hughes in 1976.

HHMI began to appoint "Investigators" at several major medical centers: Harvard, Yale, Hopkins, Duke, U of Washington and Vanderbilt and soon many others were added. A Medical Advisory Board Chaired by GWT included Hans Neurath, Victor McKusick and Rollo Park. Later added were, Holly Smith, Jim Wyngaarden and George Cahill. Headquarters were in Miami and in 1980 an estate on Biscayne Bay in Coconut Grove was purchased, run by HHMI's business manager, Kenneth Wright. In 1976 Mr. Hughes died, tragically from obstructive renal failure due to ingestion of analgesics. He was en route to Houston for dialysis. "Tragically" is appropriate. John Merrill's development of dialysis was supported by HHMI!

After Mr. Hughes death, the IRS declared HHMI a "Private Foundation" which led to major financial problems and, in addition, the Hughes-appointed then Executive Committee of F. William Gay and Chester Davis petitioned the court in Las Vegas that the entire Hughes fortune be assigned to HHMI.

Messrs. Gay and Davis subsequently elected GWT to the Executive Committee and appointed him president. This put GWT into a unique position, certainly for a man trained in biomedical research and experienced in medical administration and politics, but not in law and higher finance.

The role of HHMI subsequently in biomedical science is too well known except for a number of relatively little things that only a private institution can accomplish rapidly and efficiently. A few examples include the *Aplysia* farm built at the Woods Hole Oceanographic Institute to grow Eric Kandell's snails, the "public" port at the Brookhaven synchrotron, and the construction of the "Cloister" facility at the National Institutes of Health for 50 or so medical students to spend a year of research fellowship. The first international organizational meeting for the human genome was organized at the NIH by HHMI. The list could go on and continues today with the construction of the \$600 million facility on the Potomac River, the Janelia Farm Project to accommodate collaborative efforts of investigators with the latest available instrumentation. GWT chaired the board of HHMI 1984-90, but HHMI was only one of his numerous activities. A select other few were:

Editor-in-chief, Harrison's Textbook of Medicine

Vice-President and Chairman of Scientific Advisory Board, Whitaker Health Sciences Fund

Member of the Corporation and Executive Committee and many other academic functions, Massachusetts Institute of Technology (1956-2004)

Member of the Corporation, The Museum of Science, Boston

Chairman of the NIH General Research Center Committee

GWT received numerous honorary degrees including one from Harvard, and many prestigious awards. These included the Public Welfare Medal of the National Academy of Sciences, the John Phillips Memorial Award of the American College of Physicians, the George M. Kober Award of the Association of American Physicians and, as mentioned earlier, the Gold Medal of the American Medical Association on two occasions. His last recognition was the Lifetime Achievement Award of the Massachusetts Medical Society in 2003, attended by family and many professional and social friends. His acceptance comments were brief, witty, eloquent and humble. Age 97!

Now to say a few words about the man. Those who had the privilege to be his associate one way or another, either in an official capacity on a board, or as a scientific collaborator, as a friend, house officer or medical student, as a tennis partner, or particularly as a patient, were struck by his gentle, warm, not effusive, but patient and understanding relationship with people. When you were with him, he was 100% with you, no matter who you were. One very anxious female patient was given a prescription to take 1 grain of thyroid daily, to be ingested at the end of her breakfast, bottle to be on the table, so not to forget. Obviously a therapeutic placebo! The bottle was a surrogate for GWT and his care, as he explained later to the accompanying house staff and entourage of visiting dignitaries. He was also an amateur but accomplished musician. Expert on the tenor 4-string banjo, he played with a small group composed of Frannie Moore on the piano, with Walt Goodale, John Merrill, and others, the "Malady Boys." He also dabbled in many other activities, learning navigation, sailing, bridge (with Mr. Vanderbilt, himself). He spent several months leave-of-absence as Physician-in-Chief to work as a research fellow in the laboratory of Bert Vallee. Vacations included Switzerland, where to the consternation of his

young accompanying son, Weston, he would climb a mountain and ride the telepherique down. In his later life, his enjoyment centered on management of his forest of some 300 trees on Coolidge Point, Manchester. His philosophy was you did not have to coddle the trees; they took care of themselves when he had other more pressing activities.

Most significant was his wife, Doris, who was an ebullient, socially vivacious and most gracious lady. In the early days a helper, and even a control research subject, as mentioned previously. She was a major support in his role as Chief of Medicine and knew the first name of every house staff member, as well as that of their spouse. Their son, Weston, now has established himself as a leading expert and auctioneer of antiques and fine arts, centered in Litchfield CT. Two grandsons, Nicholas, now assisting his father, and Tyler, in his second year in law school, were the pride of their grandfather. GWT spent much more time with the two than he was able to do during Weston's childhood. Doris Thorn died in 1984. GWT later married Claire Steinert, the widow of Alan Steinert, Sr. who had played a major role as Chairman of the Board of the Brigham. For the next 5 years, until her death, their relationship was exemplary with much joy for both, as had been his with Doris. George Widmer Thorn died quietly, age 98, June 26, 2004.

S. James Adelstein, MD,PhD
Eugene Braunwald, MD
Curtis Prout, MD
Weston Thorn
Gordon Williams, MD
George F. Cahill, Jr. MD, *Chairman*