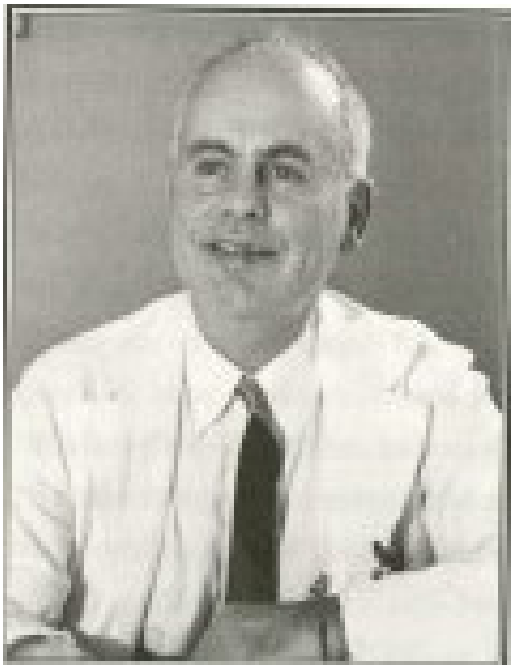
THE FACULTY OF MEDICINE
Harvard University

Kendall Emerson, Jr.



Kendell Emerson, Jr. died on April 27, 1993 of metastatic cancer at his home in Brookline, Mass. He was 86. He is survived by his wife, Betty; his daughters, Ann, Jean Davison and Bonnie Davis Gerrard; his sons, Jonathan and Benjamin; and his 10 grandchildren and two great-grandchildren. Kendall Emerson was born on March 1, 1907 in Worcester, Mass., and obtained a bachelor's degree at Yale University in 1929 and his M.D. at Harvard Medical School in 1933. Following an internship and residency at the Presbyterian Hospital in New York, he joined Professor E.K. Marshall in the pharmacology department at Johns Hopkins Medical School.

In 1937, he coauthored his first scientific publication, "The Acetylation of Para-Amino Benzine Sulfonamide in Experimental Animals." His later studies included "Para-Amino Benzene Sulfonamide: Absorption and Excretion, Method of Determination in Urine and Blood," as well as his first approach to a career in endocrinology with papers on renal excretion of thyrotropic hormone and refractoriness from pituary thyrotropic extracts.

In 1937, Dr. Emerson joined George Thorn in the Department of Medicine at Johns Hopkins, where he completed an assistant residency program on the metabolic ward of that institution, and initiated his career studying kidney disease and endocrinology. Concerning the latter, he coauthored papers on adrenal cortical therapy, including studies on an oral preparation of adrenal extract, as well as "pellet" implantation of crystalline desoxycorticosterone, a synthetic adrenal cortical hormone prepared by Reichstein of Switzerland. Demonstrating his early and continuing interest in the problem of edema, he coauthored a study on the role of gonadal and adrenal cortical hormones in the production of edema. He completed this study before leaving Hopkins for the Rockefeller Institute in New York.

From 1939 to 1942, Dr. Emerson worked at the Rockefeller Hospital Institute as an assistant resident in medicine and as a fellow in the laboratory of Donald Van Slyke. There, in collaboration with L.E. Farr

and Palmer H. Futcher, he studied the varying relations between insulin, creatinine and urea clearances in children with nephrotic syndrome. This same group also compared the comparative efficiency of intravenous amino acid therapy in children with kidney disease as well as the changes in calcium metabolism.

In late 1942, the Rockefeller group was taken over by the U.S. Navy, and relocated to the Pacific Ocean on the island of Guam. Their first report to the Navy described a copper sulfate method for measuring specific gravity of whole blood and plasma, with line charts for calculating plasma proteins, hemoglobin and hematocrit. These were followed by studies of patients with primary atypical pneumonia and patients with tropical eosinophilia. While stationed in the South Pacific, Dr. Emerson and his collaborators investigated problems related to idiopathic steatorrhea and acute P. Vivax Malaria. Again reverting to Emerson's earlier interest in kidney disease, Drs. Van Slyke, Dole and Emerson investigated the effect of shock on kidney function.

As World War II drew to a close, Kendall Emerson was invited to join the Department of Medicine at Harvard Medical School and Peter Bent Brigham Hospital. Here he was provided with laboratory facilities, and became an active full-time member of the teaching and visiting staff. His first paper in 1946, which he worked on in conjunction with Dr. Thorn, involved a study of the metabolic changes induced by the new synthetic adrenal hormone, ll-dehydrocorticosterone acetate. Returning to kidney research, he described the use of orally administrated cation-exchange resins in the treatment of edema and the adaption of the gastrointestinal tract in the prevention of sodium depletion. From this point on, his interests oscillated between studies on breast cancer (from which his first wife had died as a very young woman) and the evaluation of abnormalities in patients with kidney disease, particularly nephrotic syndrome. His description of tests for hormone dependency in mammary and prostatic cancer were followed by studies on the role of pituitary gland function in carcinogenesis. His clinical studies, done in collaboration with Drs. Jessiman and Moore, related to the problems involved in the effect of hypophysectomy in female patients with breast cancer. His further investigation related to hypercalcemia in patients with breast cancer, the response of ovarian estrogen production to adrenocortical stimulation, adrenal structure and function in advanced breast cancer, and estradiol production after ovariectomy.

With his appointment in 1960 as physician to Boston Lying-In Hospital, Dr. Emerson's research interests turned to pregnancy. His first study, which was done in association with Drs. Saxena, Refotoff and Selenkow, involved the development of a rapid radioimmunoassay for human placental lactogen. This method was later applied to patients with molar pregnancy and trophoblastic tumors. The serum placental lactogen levels were employed as an index of placental function, and the correlation between human growth hormone and placental lactogen was established. The abnormalities of serum placental lactogen and chorionic gonadotropin in patients with diabetes mellitis established another hallmark relating to hormonal changes in pregnant diabetics. He also analyzed the caloric cost of pregnancy, a study which was carried out in collaboration with Drs. Saxena and Poindexter.

In 1973, after retirement from official Harvard Medical School duties, Dr. Emerson accepted a position as physician at Harvard University Health Services. He soon attracted a large group of patients who recognized something very special in this wise and witty man whose humane and gentle temperament was so much a part of him. He was sought out by members of the senior faculty as well as freshman law students because he was sensitive to their needs. His encyclopedic knowledge, as well as his talents as a caring physician, was always apparent. He also was comforting to his younger colleagues as he so often helped them when the stress of seeing patientss was overwhelming them.

During his years at the law school, he was preferred to as the "Professor." His example served as a standard to be emulated throughout the University Health Services. At the time of his retirement from the health services, the director of the law school clinic commented. "Dr. Emerson exemplified what an excellent internist can be when he possesses a bit of the divinity which is so often inappropriately attributed to physicians."

The many educational contributions of Dr. Emerson include the chapters that he contributes to the textbook "Principles of Medicine." For the first edition he wrote the chapter on intermediary metabolism, and in the second version, he wrote the discussion on glycogenesis. In the third edition, he contributed the chapter on errors of metabolism. In the fourth and fifth editions, he wrote chapters on disorders of ovarian function. For the sixth edition, he contributed the discussion on diseases of the breast.

For the journal *Nutrition Review*, he reviewed problems related to nutrition in diabetes, and he was a coauthor with Drs. Thorn and Forsham of the monograph on "Diagnosis and Treatment of Adrenal Insufficiency" in 1949. In "Medical Clinics of North America," published in 1951, he wrote the chapter entitled "Adrenal Disorders, Diagnosis, Pathology and Treatment," and in 1956, he wrote "Treatment of Addison's Patients" for the AMA *Archives of Internal Medicine*. In 1960, he wrote a chapter on endocrine management of breast cancer in "Medical Clinics of North America." Dr. Emerson coauthored, with the surgical service at Peter Bent Brigham, "The Relation of Steroid Excretion to Adrenal Morphology and the Outcome of Adrenalectomy, With Description of a New Discriminant Function" in the *Journal of the American Medical Association* in 1967.

Dr. Emerson was a member of the Royal Society of Medicine, the American Society for Clinical Investigation, the Federation for Clinical Research, the American Diabetic Association, the American Clinical and Climatological Association, the Endocrine Society and the American College of Physicians.

Kendall Emerson's life was enriched by his attachment to the sea, having spent many summers at his family's home in Harborside, Maine. He was an accomplished sailor and navigator. A weekend or a few days aboard the Avant or the Billy "down east" off Mount Desert was quite an occasion. Another example of his vitality was his success in tennis, which he did not take up seriously until he

was in his 60's. With his wife, Betty, he was involved in many Brookline neighborhood activities, and the Emersons received wide acclaim for their support of Elma Lewis in the surrounding Boston communities.

Respectfully submitted,
George W. Thorn, *chairman*
Lewis Dexter
Francis Moore
Warren Wacker