

Biographical Article

James Smith Dinning (1922–1991)

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James Smith Dinning

James Smith Dinning was born in Logan County, Kentucky, near the town of Franklin on September 28, 1922. Franklin is a small farming community south of Bowling Green, close to the Tennessee border. His parents, James Starks Dinning and Fanny Blanche Smith Dinning, were of Scotch-Irish extraction. He had one sister, Ann Elizabeth Houston. Jim attended small elementary and secondary schools near his home, and he graduated as valedictorian from Middleton High School in Franklin in 1939 in a class of 13 students.

As so frequently happens, Jim developed his interest in learning and his desire for a college degree through a close association with sympathetic teachers who knew their students well. Times were hard in this part of rural Kentucky during the Great Depression, and higher education was viewed as essential for success. He entered the University of Kentucky in September 1939, with his initial sights set on a career in agricultural science.

As fate dictated for so many young men during that period, Jim was drafted into the U.S. Army in 1942. Nonetheless, he was able to complete his junior year of college. After some basic training, Jim was transferred to the U.S. Army Specialized Training Program (ASTP) of the Engineers' Corps in May 1943, and was assigned to the University of Oklahoma for a two-year period. During his assignment in Norman, he met Sally Sue Hensley, whom he married on October 28, 1944. When they met, Sally was Assistant Dean of Women at the University of Oklahoma, with responsibility for social programs. While there, Jim was asked to take an entrance exam to medical school at the University of Tennessee in Memphis. Jim was one of only 10 persons from the army group in Oklahoma to be accepted into that medical school. Many who stayed behind in Norman would soon enter World War II action at the Battle of the Bulge.

While in medical school at Tennessee (1945–1946), he decided that medical practice was not what he wanted as a career. While there, however, Jim developed a strong interest in biochemistry, and applied to Oklahoma State University, then called Oklahoma A&M College, for a graduate degree. Jim received the Bachelor of Science degree from the University of Kentucky in 1946, while still in the U.S. Army.

After leaving the Army, Jim enrolled in graduate school at Oklahoma A&M College with a research assistantship in May 1946. H. M. Briggs of the animal science department served as Jim's major professor. Jim's research project on the effects of exogenous urea

on nitrogen metabolism in beef cattle earned him a masters' degree in 1947 and provided the basis for his first research publication. Because the animal science department did not have laboratories, his bench chemistry was performed in Willis D. Gallup's laboratory in the agricultural chemistry department. Jim continued his research work for a doctoral degree in animal husbandry, with specialization in animal nutrition, biochemistry and physiology. His Ph.D. degree, conferred in the spring of 1948, was the first such degree to be awarded by Oklahoma State University. Jim's first two refereed papers were in the American Journal of Physiology and the Journal of Biological Chemistry. With these as a start, Jim was eventually to publish over 120 refereed journal papers. As a personal note, the first two of the Dinnings' four children, Katherine Sue and James Michael, were born in Stillwater during Jim's graduate student period.

Prior to graduation, Jim was offered a position as an assistant professor of biochemistry by Paul L. Day, who was chairman of the biochemistry department at the University of Arkansas School of Medicine in Little Rock. Incidentally, Jim had learned about this opening while attending an annual FASEB meeting. Jim was particularly interested in working with Paul Day because of their mutual interests in nutrition and biochemistry. A highly fruitful collaboration began immediately and lasted for over a decade. Indeed, three journal papers appeared in 1949 alone. Their research interests, while focused on vitamin B-12 metabolism and function, also included the influence of folic acid on methionine metabolism as well as other topics. A turning point in Jim's career developed, unsuspected by him at the time, when he became interested in vitamin E. The two other Dinning children, Robin Joann and Randall Starks, were born while the Dinnings lived in Little Rock.

In 1952, Jim was persuaded by Robert E. Olson to join the biochemistry department at the University of Pittsburgh as an assistant professor of nutrition. Jim returned to Arkansas in 1953 as an associate professor. On the basis of his scholarly research and his excellent teaching at Arkansas, he received in 1955 the Lederle Medical Faculty Award. In 1957, he became an assistant dean for academic standards and student affairs at the medical school, and he was appointed professor of biochemistry and head of the department when Paul Day retired in 1959. In the same year, Jim became assistant dean of the Graduate School at Arkansas. During this period of increasing levels of academic responsibility, Jim primarily focused his research efforts on the metabolism and function of vitamin E.

His most notable observation, first presented at a FASEB meeting and then in a series of journal papers published in the early 1960s, was that vitamin E-deficient monkeys developed a hemolytic anemia characterized by decreased erythrocyte survival. This condition was reversed by the administration of α -tocopherol

but was refractory to other antioxidants. For the first time, vitamin E was specifically implicated in hemato-poiesis by a mechanism different from those involving iron, folate and vitamin B-12.

During the 1950s, Jim's research began to receive funding from the National Institutes of Health, specifically, for the effects of vitamin E on the macrocytic anemia associated with this deficiency in primates. The U.S. Public Health Service was simultaneously supporting the work of Dr. Amin Majaj of Jordan, who found that many malnourished infants in the Jordanian sector of Jerusalem suffered from megaloblastic anemia, an anemia that was not reversed by folate. In 1962, the NIH asked Jim to investigate these findings. After a quick trip alone to the region, Jim, together with Sally and their children, then ages 16, 14, 12 and 11, returned to Jordan so that he could conduct a repletion study using vitamin E. Jim worked with Dr. Majaj at the UN-funded Augusta Victoria Hospital in Jerusalem, which also had ties with William Darby at Vanderbilt University, and at a refugee camp in Jericho. Jim and his colleagues clearly showed that vitamin E induced a reticulocyte response as well as other hematologic improvements in anemic, malnourished Arab children.

Sally Dinning remembers that life in Jerusalem was challenging but exciting and rewarding for the family. The experience was also very satisfying for Jim professionally. A grateful young monarch, King Hussein I of Jordan, who took the throne upon the assassination of his father, Emir Abdullah Hussein, granted Jim two audiences. King Hussein also awarded Jim the Jordanian Medal of Independence in 1963 for his efforts to improve the health of children in Jordan.

Upon returning to Arkansas, it was clear that Jim's view of the academic world had changed. For example, he mentioned that King Hussein was "almost easier to get to see than the dean of the medical school." By the time he returned from Jordan, he had been at Arkansas for 15 years. Jim reasoned that, after he "had held about every job at the university, had served on every committee, and had had at least one skirmish with every professor," he was ready for a change. Later in life Jim said that people should have three careers—he was ready for number two.

An opportunity for a second career came via Richard Anderson, a representative of the Rockefeller Foundation in New York. Anderson's purpose in visiting the Dinnings in Little Rock was to inquire whether Jim might be interested in more overseas service, specifically as a staff member of the Rockefeller Foundation in their worldwide University Development Program. The Foundation had developed the Peking Union Medical College in the 1920s and had aided Siriraj Hospital and Medical School in Bangkok in the 1930s. The Foundation felt that it was time to return to Thailand. As Jim later recalled, Anderson told him that he could continue to give concluding remarks at vitamin E symposia in the United States until he retired, or he could

do something completely new. Jim couldn't resist the challenge and, within two months of Anderson's visit, he was in Bangkok.

The original intent of the Foundation's offer was to have Jim set up a department of biochemistry in the Faculty of Science, a unit of the University of Medical Sciences in Bangkok. He was initially appointed for a two-year tour, after which he had the option of returning home or of staying for a significantly longer period of time. It soon became clear to Jim that what Thailand really needed was a newly configured, up-to-date medical school, not just an appended biochemistry department. He subsequently was able to convince George Harrar, President of the Rockefeller Foundation, that the Foundation should make a major investment in this project in Thailand. The Thai government, concurring with this view, contributed equally to the development.

Jim's counterpart in this collaborative effort was Dr. Stang Mongolsuk, the dynamic dean of the Faculty of Science. Stang was born in a fishing village in southeastern Thailand, but by dint of his ability and drive had been selected by the Thai government for graduate training in chemistry in the United Kingdom before returning to Thailand. Jim and Stang made a great team. Jim, in his low key, seemingly relaxed way, related well to the Thai and made wise decisions on programs and funding, whereas Stang, sympathetic to Jim's educational views, understood perfectly how to obtain concessions from Thai officialdom. Although very different in many ways, they became good friends as well as highly effective professional colleagues.

In 1965, Jim was appointed Thailand representative of the Rockefeller Foundation, a post he held for 10 years and, in 1968, he was also appointed associate director for medical and natural sciences at the Rockefeller Foundation. Starting in 1964, he and Stang created an entirely new set of science departments and started to change ingrained educational traditions. Highly talented Thai science students with bachelor's degrees were selected by Stang to go to the United States or the United Kingdom for graduate training leading to the Ph.D. degree. While this activity was underway, Jim was recruiting established scientists from the United States to chair new departments. The latter then selected young faculty with Ph.D.s or M.D.s from the United States, Germany, Australia and India to teach courses and to initiate research programs on a relatively short-term basis. The junior faculty from abroad returned home as Thai students with new Ph.D. degrees came back to Thailand to take up faculty positions. Jim's idea was that the Thai scholars "should come back to viable, forward-moving departments." The expectations for success were high. In 1969, the University of Medical Sciences was renamed Mahidol University in honor of a Thai prince, educated at Harvard Medical School, who was a practicing physician and the father of the current Thai king.

Jim was justifiably proud of what had been accomplished in Thailand. Two large new facilities had been built: the Faculty of Science and the adjoining Ramathibodi Hospital. The Thai faculty of both of these institutions were outstanding in quality and dedication. Active research programs in all areas of life sciences and medicine, but with a particular emphasis on nutrition, were flourishing. Both institutions had increasingly received international recognition in terms of grants, workshops, visiting scholars and publications in leading scientific journals. In a medical context, primary health care was receiving well-deserved attention. Subsequently, with Jim Dinning's encouragement, a National Institute of Nutrition was established under Aree Valyasevi's capable leadership.

Ten years after Jim arrived, the Faculty of Science and Ramathibodi Hospital were operating at an international level in education, research and patient care. Jim was particularly pleased that the dynamic educational program that he had helped to create at Mahidol University remained fully viable long after his departure. He was awarded an honorary Doctor of Science degree from Mahidol University in 1974.

The Dinnings, while in Bangkok, experienced a regal lifestyle, with cocktail parties with diplomats and audiences with the King and Queen. Entertaining dignitaries, including John D. Rockefeller, Ralph Bunche, Father Hessberg of Notre Dame, and Nobel laureates was also part of the job, and Jim and Sally loved it. The Dinnings had a chauffeured Mercedes and, on numerous occasions, took trips to Pattaya, a seaside resort area in Thailand. Also among the frequent visitors were nutrition scientists well-known for their expertise, such as Harry Broquist, George Davis, Paul Gyorgy, Tom Jukes, Klaus Schwartz and Bob Stokstad. In a statement commemorating Jim's retirement in late 1984, AIN President Harry Broquist reflected on the "Great Moments in History," including evenings with the Dinnings, martinis, and Dixieland jazz at the Erawan, an exotic Bangkok hotel.

Jim Dinning was in Thailand for 12 years (1963–1975), except for a home leave back to the United States in 1970. During that year, Jim was visiting professor of biochemistry at Vanderbilt University School of Medicine at the invitation of his friends, William Darby and Harry Broquist. At the end of Jim's stint in Bangkok, he was assigned to the Rockefeller Foundation office in New York, where he served as associate director for agricultural and health sciences for three years. A year after returning to New York, Jim, having fully completed his Bangkok assignment, requested retirement so that he could re-enter the academic arena and reinitiate research activity.

During the creation of a new campus of the Faculty of Science at Salaya, just outside Bangkok, the Foundation sent to Bangkok as a planning consultant in the early 1970s J. Wayne Reitz, a former president of the University of Florida. Learning in 1977 that Jim was

ready to leave the Foundation, Reitz convinced him to accept a senior faculty appointment at the University of Florida. He and Sally were attracted to Gainesville by the excellent basic and biomedical science in the University, by its international programs, albeit primarily focused on Latin America, by friends living there, and by the temperate climate. Career number three was about to start.

Upon his return to the United States, Jim realized that American academia had changed a great deal, and he wanted to participate in this new thrust. He arrived at Florida at just the right time, as interdisciplinary research had become a major university focus. Jim's appointment was in the Institute of Food and Agricultural Sciences (College of Agriculture), which had a major international program. During his sojourn with the Rockefeller Foundation, he had come to the conclusion that nutrition and agriculture needed to work closely together rather than going their separate ways. So he developed a graduate course based on this premise, called "Nutritional Status and Food Policy," which enrolled many international students. He also developed, with other faculty, a research project to examine the nutritional status of low income Floridians, particularly focusing on groups where nutritional deficiencies were likely to exist, namely, urban and rural adolescents and elderly.

Jim was able to convince the Rockefeller Foundation to support preliminary research studies on the nutritional assessment of Florida residents. Just after the initial data were produced, the USDA started the Competitive Research Grants Program in the nutrition area. On the basis of his preliminary studies, he received a large grant to conduct the most comprehensive nutrition survey ever undertaken in Florida. Jim's view of the importance of this research was revealed in an interview with Kathleen Shores just prior to his receipt of an honorary degree. "This is the only time, as far as I know, that economists interested in food policy had access to their own hard laboratory data on nutritional status. Policy in the past has been made on the basis of dietary surveys, which sometimes are not particularly accurate." The research focused on south Florida. Jim was aided by fellow faculty members Patricia A. Wagner and Lynn B. Bailey, both of whom were new to the Gainesville campus. George J. Christakis of the University of Miami School of Medicine also worked closely with Jim on this large survey project.

In 1978, another career opportunity was presented to Jim: editorship of *The Journal of Nutrition*. He took over the helm from Professor Frederic W. Hill in 1979 with editorial responsibilities starting with volume 110. His goal for *The Journal* as its fifth editor was "to foster high quality basic research and to encourage valuable studies in applied nutrition," a philosophy that remains today. Jack Loosli, formerly of Cornell University, very ably served as an associate editor with Jim. After attending a conference of scientific journal

editors during his term, Jim returned convinced that editors should limit their terms to about five years. He consequently passed on his editorial duties in 1984, but with mixed feelings about some goals that had not been fully met. Dorothy Cowart, who served with Jim as *The Journal's* assistant editor, remembers how interested Jim was in increasing the international scope of *The Journal*.

Because of Jim's international expertise, George Davis asked him to chair the scientific program committee for the highly successful XII International Nutrition Congress held in San Diego in 1981. But some dark clouds were gathering. Jim was not able to attend the Congress that he had helped to orchestrate. In early 1979, Jim learned that he had cancer in the mandibula. Radiation did not prove effective, and in March 1980 he required surgery. The effects of his facial surgery did not long deter him from fulfilling his duties as *Journal* editor and as a senior professor. Jim decided to retire from his third career at the University of Florida in the Fall of 1984. A celebration in his honor was held in December 1984, and he was awarded emeritus status.

Jim and Sally purchased a lake home in Putnam Hall, not far from Gainesville, because the terrain reminded them of the Thai countryside they so enjoyed. Fishing and chatting with neighborhood folk became his new pastime. Jim died on December 1, 1991, survived by Sally, his sister, four children, six grandchildren and two great-grandchildren.

We have already commented on some of the awards that Jim Dinning received over the years: the Lederle Medical Faculty Award, 1955; the Jordan Medal of Independence, 1963; and an honorary Doctor of Science degree from Mahidol University, Bangkok, 1974. In addition, he served as associate editor of *Nutrition Reviews*, 1953–1958; as a member of *The Journal of Nutrition* Editorial Board, 1955–1959; and as a special consultant (Study Section member) to the National Institutes of Health, 1957–1961. He was particularly proud of having received the Mead Johnson Award of the AIN, 1964; the Faculty of Medicine Commendation Award, Siriraj Hospital (Bangkok), 1983; the AIN's Conrad A. Elvehjem Award for Public Service in Nutrition, 1984; an honorary Doctorate of Medical Science from the University of Arkansas, 1985; and a Distinguished Alumnus Award from the University of Kentucky, 1986. His professional memberships included, besides the AIN (now ASNS), the American Society of Biological Chemists (now ASBMB) and the Society for Experimental Biology and Medicine. Biographical sketches can be found in *Who's Who in America* and in *Who's Who in the World*. Jim's favorite listing was in *Who's Who in Science from Antiquity to the Present*, where he liked to point out that he is cited immediately prior to the Greek philosopher, Diogenes.

This remembrance of Jim Dinning is a combined view from our associations with him at different phases of his career. A common link is that both authors were

recruited by Jim for specific positions, Jim Olson for the chairmanship of the Department of Biochemistry in Thailand, and Bob Cousins for the Boston Family Professorship of Nutrition at Florida. Our reflections are based in part on long conversations with Jim—he loved to “hold court,” one on one—and he was always able to see the humor in even the most difficult or incomprehensible situations. He was wise, innovative and considerate, and together with his lovely, vivacious and charming wife, Sally, enjoyed life fully.

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