THE FACULTY OF MEDICINE
Harvard University

S. James Adelstein



Photograph courtesy of the Department of Radiology, Brigham and Women's Hospital

Stanley James (Jim) Adelstein, MD, PhD, the Paul C Cabot Professor of Medical Biophysics, Emeritus, at Harvard Medical School, died on January 16, 2026 at the age of 97. Born in Brooklyn in 1928, he earned his BS and MS degrees from MIT before earning an MD at Harvard Medical School in 1953. He completed his PhD in biophysics at MIT with Bert Vallee in 1957. He did his internship and residency at the then Peter Bent Brigham Hospital, which became part of Brigham and Women's Hospital, where he remained on staff for his entire career. Jim had major leadership positions through his career at the Brigham and at HMS, where the changes he fostered had profound impact.

His initial impact was at the Peter Bent Brigham Hospital, where in 1968 after 8 years of radiation biology bench science in the Department of Anatomy on the quadrangle, he launched the Division of Nuclear Medicine in the Radiology Department. This grew shortly to become the Joint Program in Nuclear Medicine (JPNM) that included a number of the other HMS affiliate institutions with Nuclear Medicine units.

The origins of the JPNM and Jim's involvement are striking. The Chair of Radiology at the Brigham, Herbert L. Abrams, realizing that the newly established program needed a leader, turned to Jim, a radiation biologist who in his own words, knew almost nothing about the emerging field of nuclear medicine. With encouragement from Abrams and others including his wife, Tay, Jim accepted the role and built what became the premier division of nuclear medicine in the country. He established a nuclear medicine residency in 1971 and quickly recruited three residents: James Fletcher (who became head of the PET program at the University of Indianapolis), Bill Fletcher (who became head of nuclear medicine at Dana-Farber Cancer Institute), and Barbara McNeil (who founded the Department of Health Care Policy at HMS while simultaneously working in the JPNM). Jim was a rigorous and careful mentor, and, under his

leadership, the JPNM has trained more than 150 clinicians in nuclear medicine, many of whom hold leadership roles nationally and internationally. The JPNM, one of the first joint residency and research programs at HMS, initially included the PBBH, the West Roxbury VA Hospital, and Boston Children's Hospital. It still exists and now also includes the Dana-Farber Cancer Institute and the Beth Israel Deaconess Medical Center. Jim directed the program until 1992, stepping down shortly after becoming Executive Dean for Academic Programs at HMS.

Jim was one of the foundational figures in modern nuclear medicine and radiation biology whose scientific work reshaped how radiation is understood and applied in clinical care. Over more than five decades, his research advanced our understanding of the physics of radionuclide decay and its radiobiological effects, establishing principles that remain central to diagnostic imaging and targeted radionuclide therapy. His work centered on the consequences of microscopic energy deposition by radionuclide decay particles with highly specific ionization.

His research focused on how radioactive decay particles deposit energy at the microscopic scale. By championing microdosimetry, he and his colleagues provided more accurate dose estimates at the cellular level, proving that conventional dosimetry falls short when assessing true radiation risk. His basic research centered on alpha and low energy electron emitters, and his work was among the first to demonstrate their power in cancer therapy. This is now a burgeoning area, exemplified by the α-particle emitter radium-223 and the β-particle emitter lutetium-177-labeled compounds for advanced prostate cancer, and more agents are emerging. The pairing of targeted radiotherapy with nuclear medicine imaging has given rise to "theranostics," a new field in radiology. Jim can rightly be considered one of its founders.

Jim was particularly proud that two of his early recruits, Michael Davis and Alun G. Jones, who, collaborating with Alan Davison and Michael J. Abrams of MIT, invented Technetium 99m Sestamibi. The radiopharmacutical, which was commercialized as Cardiolite® by Lantheus Medical Imaging, now a multibillion-dollar corporation, remains a cornerstone in diagnosing heart disease. This was pioneering in an era before hospitals and universities aggressively asserted ownership over innovation.

Throughout his career, Jim received many of nuclear medicine's highest scientific honors, including the Hermann L. Blumgart Award, the Paul C. Aebersold Award, the George de Hevesy Nuclear Medicine Pioneer Award, and the Loevinger–Berman Award for Excellence in Internal Dosimetry. These recognitions reflect a lifetime of contributions that advanced the physics of radioactive particle interactions, the chemistry of radiopharmaceuticals, and the biological understanding of radiation effects. His work remains a cornerstone of radiation science and a testament to the power of rigorous, curiosity-driven research.

Jim's scientific influence extended far beyond his own laboratory. He served for 19 years as Vice President of the National Council on Radiation Protection and Measurements and chaired the National

Academy of Sciences' Board on Radiation Effects Research. His expertise was instrumental in shaping multiple reports issued by the National Academies, the International Commission on Radiological Protection, and the International Commission on Radiation Units and Measurements. His scientific output— more than 200 peer-reviewed publications—and his mentorship of over 80 postdoctoral fellows helped disseminate rigorous, quantitative approaches to radiation science throughout the field.

Shortly after Dan Tosteson became HMS dean in 1977, he approached Jim to be his Executive Dean for academic programs, with a portfolio focused on two major assignments, the reform of medical student education and organization of the faculty. Jim's initial response was "which poor soul is going to struggle with faculty members on those issues?" He was already secure in his nuclear medicine academic career and in running highly regarded training programs and an innovative, productive lab. Also adding to his initial disinclination to take on the role, other than leading the honors committee for student research, he had very limited engagement in the undergraduate curriculum and a similar unfamiliarity with faculty appointments and promotions and with faculty governance. With expert "pied-piper" coaxing, irresistible convincing, dogged determination, and a masterful appeal to Jim's ego, Dan made it impossible for Jim to say no.

What Jim lacked in experience he made up for in wisdom and drive, for which his former leadership roles had equipped him. As he liked to say, he provided the "verbs" to Dan's "nouns" as Jim played an oversized role in a two-decade campaign that included not only medical education reform (vide infra) but also streamlining and realigning of the dean's office; modernization of the Quad-based basic biological and social sciences and adding new, contemporary disciplines to both; recruiting outstanding department heads; and overhauling outdated faculty recruitments, promotions, and salary guidelines. During his tenure in the dean's office, he led two accreditation cycles by the Liaison Committee on Medical Education (LCME) in 1988 and 1995; undertook a recommitment to the dental school and the recruitment of its new dean; and oversaw the library, the primate and other centers, the VA Hospital affiliation, as well as the MD-PhD program and the Harvard-MIT Health Science and Technology (HST) program, which he helped initiate. Also, in a landmark 1994 report, Jim articulated the obligations of HMS faculty and the importance of protected academic time, echoes of which still resonate today.

While his role is now divided among the dean for clinical and academic affairs, the dean for medical education, and the dean for faculty affairs, Jim navigated the enormity and breadth of the role with his vintage aplomb and dexterity. How he juggled these many domains, not to mention such hot-button issues as misconduct and conflict of interest, all at the same time, is a marvel. He was the exemplary role model of a Senior Dean, dedicated to advising others with civility and dignity while consistently placing HMS' needs above his own.

Although former HMS dean Dan Tosteson is the name linked with the New Pathway medical education curriculum, Jim, as Dan's Executive Dean, did all the hard work to orchestrate and deliver this ground-breaking curriculum in the mid-1980s.

The initiative was to align medical education with principles of the way adults learn, urging medical students to take charge of their own education and transforming the curriculum away from a largely passive-lecture format. Dan didn't advocate for or dictate any particulars but left it to Jim to figure out the details. The New Pathway was anchored in problem-based learning (PBL)—learning by active engagement—conducted in small-group, case-based tutorials. The emphasis was on life-long skills of self-directed learning, rather than accumulation of facts. While HMS didn't invent PBL, they put it on the map and popularized it. In short order, it was adopted by medical schools across the nation and became an accreditation requirement!

By creating a sense of urgency; mounting a sustained, unrelenting, inspirational campaign; celebrating small successes; adopting a passionate commitment to continued improvement; and paying selective inattention to naysayers, this dynamic duo of Dan and Jim did what many said was impossible.

This new way of teaching also required a tectonic shift away from Quad-department-based courses towards central management of the curriculum—from the old way of how to be a biochemist, cell biologist, or physiologist to the new way of what do I need to learn about biochemistry, cell biology, and physiology to become a better doctor. As Jim said, the more centralized the management of curriculum, the more dynamic it is likely to be—free of departmental parochialisms and resistance to change. This huge transformation was a herculean feat, but, as former HMS dean Joe Martin reflected, Jim led these changes through kindness and fairness, sympathetic understanding and trust, common sense and good will—qualities that, along with intellectual rigor, enabled Jim to get things done.

Jim was appointed a University Professor when he stepped down as the Executive Dean, a title he held until 2003. While a University Professor, he chaired a number of Harvard-wide committees, including the Provost's Advisory Committee on Biodefense Regulations and the University Research Policy Committee. His last job at HMS when he was well into his eighties was teaching a class called "The Mentored Clinical Casebook" with Robert Blacklow (HMS 1959). He loved this work through which he experienced what dedicated and gifted students attend Harvard Medical School.

From 2010 to 2015, as an Emeritus Professor, Jim served as the President of the Vallee Foundation that had been founded by his PhD mentor, Bert Vallee. Indeed, Jim had maintained a life-long relationship with Bert Vallee, often helping to buffer the institution from Bert Vallee, who, as Jim pointed out in his own memorial minute on Bert, "Bert Vallee had an overwhelming persona". Of note, Jim helped negotiate a significant gift to HMS from Bert that established the Bert and Natalie Vallee Professorship, a chair now occupied by Wade Harper. As he notes in his memoir, "Reflections on a Partially Examined Life," his long-term relationship with Bert Vallee served as bookends for his professional career.

Jim served as the first President of the Vallee Foundation after Bert's death in 2010. This was an important time for the foundation in moving from a Friends-of-Bert society to an organization of biomedical impact. Jim was responsible for instituting two of the key programs of the Vallee

Foundation. He moved to establish the *Vallee Scholars Program* that provides significant financial support to outstanding international young biomedical scientists launching their own research careers, and to create a program to honor Kuggie Vallee, Jim established the *Kuggie Vallee Distinguished Lecturer Series* to highlight women in the biomedical sciences who had made outstanding discoveries. This annual lecture series, held at various institutions associated with the foundation, is paired with workshops exploring issues pertinent to women in science.

The name Adelstein derives from the German "edel" meaning noble, and 'stein' meaning stone, appropriate descriptors for Jim. At every stage in his career, he has fostered foundational changes that have enriched the institutions, departments, programs, and foundations that he has touched. In his honor, the *S. James Adelstein Professorship of Health Care Policy* was established in the Department of Health Care Policy at HMS.

We have all been enriched directly or indirectly by Jim. He is survived by his loving wife of over 68 years Mary (Tay), his daughter Elizabeth, his son and daughter-in-law Joe and Susan, and his granddaughter Rusty.

Respectfully submitted,

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