

Richard E. Dickerson Biochemistry Seminar Fund



To honor Professor Emeritus Richard Dickerson, a giant in structural biology and the second Director of UCLA's Molecular Biology Institute, UCLA has established a new fund to provide resources for enriching biochemistry seminars on campus. This fund, celebrating Professor Dickerson on the occasion of his 90th birthday in October of 2021, will augment the ability of UCLA's biochemists, molecular, and structural biologists to continue the tradition of bringing the best scientific minds to campus to speak and interact with our faculty and students.

Professor Dickerson was exceptionally valued by his faculty colleagues, the students in his laboratory, by the national and international research communities, and by the multitude of undergraduate and graduate students he taught. This fund recognizes the significant contributions of Professor Dickerson to research, education, and the strength of the UCLA academic community.

Many thanks to the following former students, colleagues, family, and friends of Professor Dickerson whose contributions made this seminar fund possible. All contributions were matched by the Jung Matching Initiative.

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Professor Emeritus Richard Dickerson, a native of Illinois, received a bachelor's degree in chemistry from the Carnegie Institute of Technology in Pittsburgh (now Carnegie Mellon University) in 1953 and a Ph.D. in physical chemistry from the University of Minnesota in 1957, followed by two post-doctoral fellowships, first at Leeds University and then at Cambridge University. Dickerson began his academic career in 1959 as an assistant professor of physical chemistry at the University of Illinois. In 1963 he moved to the California Institute of Technology. In 1981, Professor David Eisenberg, who had been a postdoctoral fellow of Dickerson's at Caltech, spearheaded a successful effort to lure Dickerson to UCLA where he went on to hold a joint appointment in the Division of Chemistry & Biochemistry, and the Institute of Geophysics and Planetary Physics. Dickerson was elected to the National Academy of Sciences and the American Academy of Arts and Sciences in 1985. He formally retired in 2004 but remained active in writing about science.

Since the beginning of his career, Dickerson's research in structural biology has been ground-breaking. As a postdoc at the University of Cambridge (under Nobelist Sir John C. Kendrew) he recorded the data and computed the Fourier map for the 2.0 Å structure of myoglobin, the first atomic structure of a protein. As a professor at the University of Illinois, Dickerson produced the famous "sausage" diagram of myoglobin, the basis for all future representations of atomic structures of proteins (through Jane Richardson and Irving Geis and then computer drawings). As a professor of physical chemistry at the Caltech, Dickerson's structural study of cytochrome c was expanded into a beautiful exposition of molecular evolution, exemplified by the mosaic on the wall outside the main seminar room in Boyer Hall at UCLA. At UCLA, Dickerson changed his focus to DNA and determined the first atomic structure of the B form of DNA. Watson was quoted as saying that this structure convinced him for the first time that the Watson-Crick structure was correct! Dickerson also made major contributions to the UCLA bioscience community following Professor Paul Boyer as the Director of the Molecular Biology Institute from 1983-1994. His term was characterized by expanding the membership through the campus and especially the medical school, and starting the famous Tuesday noon research lunch seminars.

Dickerson's energy was also reflected in his non-research writings. In 2005, he wrote "Present at the Flood: How Structural Molecular Biology Came About"; in 2009 a history of the Molecular Biology Institute "The Making of an Institute: The MBI at UCLA – 1960-1978".

Words of praise and appreciation from former students and colleagues:

"Dick Dickerson was a marvelous mentor. He always had time to answer questions, with clear and logical explanations that flowed from his deep understanding. His enthusiasm for science was inspiring, as were his interests in music, art, and history. He was a hands-on scientist with a gift for writing. When working on his lavishly illustrated books and research papers, he moved his typewriter into the lab, typing away as we worked around him. He dove deeply into each of his interests, whether in science or one of his numerous hobbies. He was alert to the implications of his findings, for evolution and for biology in general, and he was invariably fun to be around." David Eisenberg (postdoctoral fellow and UCLA faculty colleague).

"I am forever grateful to Prof. Dickerson for guiding my training in structural biology. His perfect combination of seminal research and insightful education and outreach have been an inspiration to me throughout my career." David S. Goodsell (UCLA Ph.D. 1987)

"Dick Dickerson will be remembered as one of the most productive leaders of structural biology, as well as molecular evolution, from the second half of the 20th century. He somehow found the time to spread such new knowledge to the world in a series of lucid and well-written textbooks, which were read widely. Throughout all of this time, he maintained a kind and congenial relationship with almost all of his colleagues and students, and gave brilliant lectures to interested listeners around the world." Horace Drew (Ph.D. Caltech 1981)

"Dick's trailblazing contributions to boranes, myoglobin, cytochrome c and DNA form the foundational canon of structural chemistry and biology. An inspiring teacher and wonderful colleague, his textbooks and research articles have been transformative." Doug Rees (UCLA and Caltech faculty colleague)

"I celebrate the brilliance of Dr. Richard E. Dickerson. He was the pivotal force in his legendary authorship and collaboration with Irving Geis, my father, who illustrated their textbooks: Structure and Action of Proteins; Chemistry Matter and the Universe and Hemoglobin. These books taught and inspired an entire generation of students and scientists, including several Nobel Prize recipients. I cherish Dr. Dickerson's articles featuring the achievements of their collaboration. A visit long ago with Dr. Dickerson and Lola in beautiful Aspen is a special memory." Sandy Geis, NYC

"Spending 30 plus years working with Dick, an excellent scientist and mentor, was a joy and I am forever grateful for the opportunities it afforded." Mary L. Kopka