In Memoriam: Alexander V. Nichols (1924-2015)

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Alexander V. Nichols, a pioneer in lipoprotein research, died in March 2015 after a valiant struggle with myelodisplastic syndrome.

Alex was Professor of Biophysics and Medical Physics at the University of California, Berkeley, and Research Biophysicist at Lawrence Berkeley National Laboratory. He was born in San Francisco to Russian immigrants, and before launching his academic career, served in the US Air Force at the end of World War II. As a graduate student with John Gofman at UC Berkeley, he was an early member of the team whose seminal work in the development and application of analytical ultracentrifugation of lipoproteins laid out the entire agenda for lipoprotein and atherosclerosis research for decades to follow. Following completion of his PhD degree in 1956, Alex remained at Berkeley where he generated a series of notable accomplishments in lipoprotein research over a nearly 40-year career. These include early work on the mechanism of action of lipoprotein lipase, the discovery of lipid transfers between lipoprotein particles, and the demonstration that HDL₂ and HDL₃ are complex mixtures of multiple subclasses. He went on to further dissect these subclasses and their molecular interconversions; in so doing, he developed methodology employing native polyacrylamide gradient gels that remains a widely used procedure for HDL subclass analysis. Another of Alex’s pioneering contributions to the field was his leadership, in the 1950’s, of a series of studies identifying dietary effects on lipoproteins that underlie recommendations for reducing heart disease risk that are still in place today.

Alex’s recognition for contributions to lipoprotein research led to his appointment as chair of the Lipid Metabolism Advisory Committee at NIH from 1972-1976, and subsequently co-
chair of the Lipid Metabolism Task Group of NHLBI. He also served for many years on the Steering Committee of the U.S.-U.S.S.R Collaborative Program in Cardiovascular Science, a position for which his fluency in Russian served him well.

Teaching was one of Alex’s great loves and strengths. He trained a host of undergraduates and graduate students in his lab and was a great lecturer. He received the Outstanding Teaching Award from UC Berkeley; his commitment and love of teaching was so great that he continued to lecture after he officially retired in 1995. Alex was very persuasive when it came to recruiting young scientists into the lipoprotein field. I (Trudy) was one of them. I will never forget our first meeting. I was a post-doc at Donner Lab doing electron microscopic studies on membrane structure and Alex got wind of this work. He invited me into his office to discuss his interest in applying this technique for learning about VLDL, LDL and HDL structure. Of course, I had no clue to what these abbreviations even meant! So I got a brief lecture on lipoproteins. That meeting started a long and productive collaboration with Alex. He certainly was responsible for my interest in lipoprotein structure/function.

Aside from being an eminent scientist, Alex was a lover of the arts, particularly music and dance. He was married to professional ballerina Sally Streets and they had a wonderful life together for over 55 years. He would chuckle when people came up to him and called him “Mr. Streets”; he loved it that his wife was so well known. He also took great pride in the artistic accomplishments of his three children: Kyra Nichols, who was a renowned principal dancer with the New York City Ballet for many years, Alexander V. Nichols, an
internationally recognized designer for dance and theater, and Robert, a former dancer with the Chicago ballet. Alex was also a great perambulator and enjoyed walking the two plus hilly miles to and from the University nearly daily until shortly before his death.

Alex Nichols was, in all senses of the words, a gentleman and a scholar. His studies set a benchmark for originality and rigor that, together with his commitment to training young scientists, have left an enduring imprint on heart disease research.

**Figure Legend:** Alexander V. Nichols, PhD. October 9, 1924 – March 9, 2015