



IN MEMORIAM

Ericka Barrett
Professor of Food Microbiology, Emerita
UC Davis
1944-2015

Ericka Lynne Barrett, an outstanding teacher, scientist, colleague, advisor and mentor, died on August 23, 2015. Ericka was central to food microbiology teaching and research at UC Davis. She modernized the food microbiology curriculum in the 80s; ably served as chair of the Department of Food Science in the 90s; and mentored more than a dozen MS and PhD students who have gone on to productive careers in academia, the food industry, biotechnology and health care. Ericka's NIH-funded research program pioneered the genetic and biochemical analysis of anaerobic metabolism in the pathogenic bacterium *Salmonella*. Long mysterious, this metabolism is now recognized as an important contributor to food-borne illness.

Born July 19, 1944 in Palo Alto, Ericka completed her undergraduate, graduate and postdoctoral training at UC Berkeley. She earned her AB in Bacteriology (1966), graduating Phi Beta Kappa and completing the honors program in Bacteriology with Great Distinction. Ericka continued her graduate training in Bacteriology, conducting her MA (1968) and PhD (1972) research in Michael Doudoroff's laboratory.

The Berkeley Department of Bacteriology was an acclaimed center for bacterial physiology and genetics, and Ericka's scientific career was significantly shaped by the renowned graduate course in microbial metabolism developed and taught by Mike Doudoroff, Roger Stanier, and Edward Adelberg. Part of Ericka's research in the Doudoroff lab identified twenty strains of *Pseudomonas* that formed a coherent phenotypic group. In 1995 these organisms were reclassified by others as the founding species of a new bacterial genus, *Ralstonia*, from Ericka's married name during her Berkeley studies.

During her graduate career Ericka gave birth to two daughters, then eventually struck out on her own as a single mother. To support her young family, Ericka took temporary teaching positions at UC Berkeley; Laney and Mills Colleges; and City College of San Francisco. Ericka's teaching ability was already highly developed, and Charles Stewart, Chair of Biology at City College, called her "a gifted teacher."

While teaching, Ericka began postdoctoral research with George Chang in the Department of Nutritional Sciences at Berkeley, where she initiated an investigation into the physiological role of anaerobic metabolism in *Salmonella*, a question that would occupy the remainder of her scientific career. Professor Chang said: "I remember those days as the happiest and most productive of my entire career. Working alongside Ericka made me feel as if I had been touched by the great bacteriological traditions of her mentors, Doudoroff and Stanier. The rest is history that Ericka wrote."

Ericka continued to write that history more fully in 1977, when she accepted an appointment as Assistant Professor in the Department of Food Science at UC Davis. The second woman in a faculty of 27 professors, Ericka built her career with characteristic understated clarity. Attending first to teaching, she thoroughly revised the undergraduate food microbiology curriculum -- initially the laboratory, with food-based experiments to demonstrate general microbiological principles, then the lecture, whose new quality led many programs to include it as an upper division requirement or elective. Under Ericka's guidance this course attracted more than 200 students per quarter.

Ericka excelled at mentoring and advising, which she viewed as a vital part of university education. In 1989-90, the College of Agricultural & Environmental Sciences formally recognized her as Outstanding Faculty Advisor for undergraduates. Ericka also advised and mentored informally – brilliantly, quietly, as part of her being.

This informal mentoring is recalled by Dr. Dan Griggs, now at the Mayo Clinic: "I can trace the genesis of my thirty-year career in biomedical research to the afternoon I met Ericka Barrett during office hours for her food microbiology class. Through her mentoring, I was transformed from an enthusiastic student of biology to a competent young scientist prepared for a career of discovery. I fondly recall my days at UC Davis because of exceptional professors like Ericka, and I regularly donate to the campus so a new generation of students can have similar profound, career-defining experiences."

Ericka also mentored junior faculty to develop rewarding research programs that addressed important questions in food science. Ericka's program was a sterling example: she focused on features that made *Salmonella* unique among enteric bacteria, reasoning these would reveal a fundamental aspect of *Salmonella* biology.

UC Davis Professors John Roth and Andreas Bäumler commented: "Ericka Barrett's work at UC Davis leaves a legacy that has had important implications for our understanding of *Salmonella* and its enteric pathogenicity. Among other things, Ericka studied reduction of tetrathionate to thiosulfate, sulfite and sulfide, the ramifications of which define *Salmonella* as a species. It enables *Salmonella* to grow anaerobically on

ethanolamine and propanediol supplied by the host, using tetrathionate as electron acceptor. This metabolism underlies *Salmonella's* pathogenicity because it allows *Salmonella* to overgrow other bacteria in the gut environment. Ericka's pioneering work continues to influence research in our labs to this day."

Throughout her scientific career Ericka was also a devoted mother, balancing the demands of family and profession. In Davis she met James Buhlert, the accomplished and easy-going manager of the Food Science pilot plant. They married in 1979, each bringing two young daughters from their previous marriages, blending them into a beautiful new family.

By the late 90s their daughters were grown, and Ericka and Jim retired to the California North Coast to build a new home and organic farm, known as the Ettersburg Address, where family and friends enjoyed cuisine, wine, and much laughter. After Jim's death in 2007, Ericka continued to operate the farm, selling fruit preserves, cherry pie filling, and quality vegetables to great acclaim, and in 2010 she was named Farmer of the Week by the Southern Humboldt Farmers Market.

How do you measure a life? Ericka and Jim's daughters would say: "In gardens planted, in children raised, in kindness shared." To extend this kindness, the family requests that remembrances be directed to the Barrett and Buhlert Memorial Food Science Teaching Award (<https://give.ucdavis.edu/go/barrettbuhlert>), established to support graduate students who demonstrate a passion for teaching and mentoring — just as Ericka and Jim did during their tenures at UC Davis.

David Ogrydziak, UC Davis

Chet Price, UC Davis

Corie Ralston, Lawrence Berkeley National Laboratory

Gary Smith, UC Davis