In Memoriam

Daniel Ross Gallie
Professor of Biochemistry
UC Riverside
1957-2020

Daniel Ross Gallie, a Professor of Biochemistry at UC Riverside, passed away on September 13, 2020, at the age of 63, after a five-year struggle with abdominal cancer.

Dan was born June 8, 1957, in Dearborn, Michigan. He earned his B.S. in Chemistry and Cellular and Molecular Biology from the University of Michigan in 1979 and his Ph.D. in Biochemistry at the University of California, Davis, in 1985. He then pursued postdoctoral studies for two years at the John Innes Institute in England and then for three years at Stanford University, first as an NIH Cancer Biology Postdoctoral Fellow and then as an American Cancer Society Senior Postdoctoral Fellow. He accepted a position as an Assistant Professor of Biochemistry at UC Riverside in 1990 and advanced rapidly up the faculty ranks, becoming a Full Professor in 1998. In recognition of his many research accomplishments, he was elected as a Fellow of the American Association for the Advancement of Science in 2005.

Dan was a graduate student when molecular methods for plant biotechnology were just being developed. For his Ph.D. dissertation, he studied the replication and stability regions of the naturally occurring plasmids of *Agrobacterium tumefaciens*, the only prokaryotic organism naturally capable of transferring DNA into eukaryotic cells. While at the John Innes Institute, Dan focused on plant virus RNA, especially on factors governing the efficient packaging of foreign RNA into virus particles and the role of untranslated 5' leader sequences on translation efficiency. He pursued his interest in untranslated leader sequences and translation during his time at Stanford and expanded

his expertise to include the role of the poly(A) tail. He brought his expertise to UC Riverside and the first publication from his new laboratory was a landmark study showing that the 5' cap and 3' poly(A) tail of mRNA function synergistically to regulate the translation efficiency of mRNA. This publication had been cited 526 times at the time of Dan's passing and Dan was its sole author. The mechanisms of RNA translation and the regulation of cellular protein synthesis were the primary foci of Dan's research at UC Riverside.

Shortly after establishing his laboratory at UC Riverside, Dan expanded his focus to include applied research having the overall goal of increasing crop productivity to address increasing world population.

During his career Dan published 111 refereed journal articles, 13 refereed book chapters, 17 review articles, 47 abstracts, and co-edited one book. He was also awarded 14 patents and had four additional patents pending. He was always in high demand as a reviewer for manuscripts and grants. He served as a member of the editorial boards of the *Journal of Biological Chemistry* and the journal *Translation*, and served on the editorial board of the *Faculty of 1000* until his passing. Dan continued these activities despite his illness

For 22 years, Dan's primary teaching assignment was the Biochemistry Department's graduate Molecular Biology course. With Dan as instructor, the course was considered to be one of the most rigorous biological sciences courses offered at UC Riverside. Student evaluations show that he was highly effective in presenting a great deal of information in a way that motivated the students to master it. His students appreciated his ability to "make the science come alive". He also taught a graduate special topics course that covered modern biochemical and molecular techniques.

Outside of his professional life, Dan loved traveling and long hikes, reading and writing poetry, and exploring Buddhism and other spiritual traditions. He was an avid cook, appreciating good food, fine wine, and lively conversation. Dan enjoyed all kinds of music, but found classical music and opera the most rewarding. He sometimes peppered his lectures with references to classical music or ballet. One notable example was his lecture on prions – infectious proteins – and how celebrated choreographer George Balanchine was a victim of a prion disease. This and other examples gave students hints of his interest in the arts. Dan played the clarinet and more recently renewed his passion for musical composition. Dan was always greatly interested in conservation. He was involved in touring and supporting Save the Redwoods projects involving redwoods and giant sequoias.

Dan was a remarkable scientist and mentor. He had an intense work ethic and set a high standard of excellence. He taught his students to always be prepared, to never miss deadlines, and to never be satisfied. He taught them not to expect accolades, awards, or external recognition, but instead helped them develop internal satisfaction values. Dan was witty, sarcastic, and never afraid to challenge dogma. He left an indelible mark and will be missed.

Dan is survived by his husband, John McCabe, and by his sister and brother-in-law Susan and Al Uema.

Written by Richard J. Debus, Stephanie Dingwall, Julia Bailey-Serres, and Robyn L. Tanguay and edited by Dallas L. Rabenstein.