

## David L. Rayle

Plant developmental biology lost a distinguished member with the untimely and unexpected death of David L. Rayle on June 17, 2001, and I lost a dear friend. Dave Rayle is probably best known



to the scientific community as one of the originators of the acid-growth theory of cell elongation. Dave had just taken early retirement from his position as professor in the Biology Department of San Diego State University and was full of plans for the immediate future.

Born in Pasadena in 1942, he attended the University of California, Santa Barbara, where he earned both B.A. and Ph.D. degrees. Dave, with his wife Merilee, spent a year at the MSU-DOE Plant Research Lab and then joined my lab as a postdoc in 1969. Following up on some data in Mike Evans's thesis, we decided to see if cell elongation in coleoptiles is sensitive to pH. During the next two years, Dave carried out a series of groundbreaking experiments that showed that plant cells elongate in response to acid and that this is due to acid-induced wall loosening. This discovery led to the "acid-growth theory," formulated simultaneously but independently with Hager and coworkers. Dave then demonstrated that auxin causes acidification of cell walls. Over the next two decades, he was involved in testing this theory, and many of the most important results came

from his lab. Over the years we collaborated on many aspects of these studies; in the end we published 17 papers together.

After leaving my lab Dave assumed the position at San Diego State University and rose through the ranks, serving as chair of botany from 1976 to 1980. But he was not always in residence there. There were several more stints in my lab, as well as a year in Germany with Zenk. When his building at SDSU had to be closed for a year to remove asbestos, he joined Terri Lomax at Oregon State University and parlayed the one year into nearly three. There he was an important part of studies on gravitropism, using the *diageotropica* mutant of tomato. Dave was one of the best bench scientists I have known. He was a master at doing precise, careful, and thoughtful experiments. There was never any question about the validity of the data that he published.

Dave's passion, in addition to his research and his family, was fishing. Whenever the steelhead were running, Dave was itching to get out there, regardless of the weather. In recent years, fly fishing while rafting down Montana rivers was an essential part of summer. It is hard to believe that he will not be out there again this summer, rain or shine, trying to outwit those darn fish. ✍

**Robert Cleland**

University of Washington, Seattle  
cleland@u.washington.edu