



I grew up in Allouez, WI, near Green Bay, with one sister. Went to an excellent Catholic high school where I learned some physics and math along with four years of Latin. I was advised to apply to MIT, Caltech, and UW (JIC). I got into all three and picked Caltech because it was smaller than MIT. Right choice!

At Caltech I landed in Ricketts House (no rotation then) and became a Chem major. My advisor, Bob Corey (of the Pauling-Corey alpha helix), suggested that I learn crystallography so I could combine some physics with chem and biology. Dick Marsh was a wonderful mentor for that.

My first published paper came after junior year summer research—the crystal structure of a random sample found in the lab. I also learned machine-language programming on the big IBM 7094s of the day. From the Ride of the Valkyries and a few upperclass friends I developed my love of opera: as of last week, I have attended 750 live performances, including 14 complete Ring Cycles. And I still play piano every day if I can.

I went to Harvard to get my PhD doing protein crystallography, which was very new at the time. The structure I worked on, carboxypeptidase A, became one of the first five protein structures to be known in 3D. I lived in Cambridge with a group mostly from Caltech: Dick Essenberg, Volker Vogt, Roger Hendrix, Rod McCalley. I met my wife-to-be, Gail Hunt, at a thesis-celebration party. Gail spent most of her career on Wall Street, over half of it at Morgan Stanley. We have now been happily married for 56 years.

After a postdoc year at Harvard, I was hired by The Rockefeller University in New York as an Assistant Professor, to work in Gerald Edelman's immunology lab on the structure of an IgG antibody molecule. Unfortunately, we never could grow a crystal of the stuff, so fame and fortune eluded me, but my colleague Joe Becker and I did get the structure of concanavalin A, a molecule popular at the time for immunological studies (1st photo). Later I moved into computational neuroscience. Students and colleagues worked on models of visual cortex, birdsong learning, anesthetic function, and how to analyze neuronal spike train entropy. We made neural network models while they were still unpopular; a couple of my favorite papers, done with Edelman, were "Real Brains and Artificial Intelligence" (1988) and "A Darwinist view of the prospects for conscious artifacts" (1995), both a bit ahead of the times.

Now I am retired but remain associated with Rockefeller, and we still have the New York apartment. I am currently in my 34th year of directing the Peggy Rockefeller Concerts, an evening chamber music series at the University. I have had some success booking upcoming artists



before they get famous and too expensive. In 1988 Gail and I bought what we thought of as a weekend house about 90 miles North of NYC on the shore of the Hudson River. It was the perfect place for us to spend much of the Covid shutdown. Over the years, we have had a lot of opportunity to travel, most recently this March to Southern Africa where we visited Victoria Falls, the Namibian sand dunes, the cape, and saw lots of animals. The 2nd photo is of Gail and me on the Table Mountain in Cape Town.