

For the Commercialization Forum:

Personal experiences as the first employee of a biotech start-up.

In early September of 1999, I successfully defended my Ph. D. dissertation. The next week I started a postdoctoral position to learn NMR methods for studying protein structures. In October of that year, a college friend arrived unannounced on my doorstep offering to double my current salary, regardless of its amount, if I would join his start-up venture in Galveston, TX. I accepted. Here, I will discuss my experiences as the first employee hired by a start-up that was founded by three people with no prior start-up experience. The initial business plan was to be a computational drug design company that performed contract and consulting work with Big Pharma. When that didn't work, we tried becoming a software company that sold and maintained the computational drug design platform. When that didn't work, we tried becoming a pharmaceutical company. That didn't work too. In hind-sight and in my opinion, many simple mistakes were made that led to the dissolution of this start-up. The things that were done well, such as leverage access to academic research facilities and federal funding, will be covered as well as some of the things that were not done very well, such as developing a good business plan and maintaining a commitment to the plan.

For the Second Forum (my passion):

The properties of disordered proteins: why it matters to biological systems and what my lab has observed.

Intrinsically disordered proteins (IDPs) are functional proteins that do not fold into stable three-dimensional structures under physiological conditions. In spite of these disordered structures, many critical biological tasks, such as gene regulation and cellular signaling, are mediated and/or controlled by IDPs. Here, I will discuss our research efforts to identify the molecular properties that regulate disordered protein structures that involves investigating the determinants of hydrodynamic size in this protein class.

Steven Whitten received a B.S. degree in physics from the University of Nebraska at Omaha (1994) and a Ph.D. in biophysics from the Johns Hopkins University (2000) in Baltimore, MD. Under the guidance of Prof. Bertrand Garcia-Moreno, his Ph.D. thesis centered on experimental dissection of charge effects on protein structure. Following a joint post-doctoral fellowship at the National High Magnetic Field Laboratory in Tallahassee, FL, and Florida State University, he worked for the biotech start-up RedStorm Scientific, LLC in Galveston, TX, for 9 years as research scientist, senior scientist, and, eventually, partner. In 2009, he left RedStorm Scientific to accept a faculty position in the Department of Chemistry and Biochemistry at Texas State University, where currently he is an Associate Professor. At Texas State University, his primary research interest has been the properties of disordered proteins.