

Jon R. Lorsch



Current Position: Associate Professor of Biophysics and Biophysical Chemistry at Johns Hopkins University School of Medicine

Education: Ph.D. in Biochemistry (1995) from Harvard University where he isolated RNAs with novel functions from large pools of random-sequence RNAs; B.A. in Chemistry (1990) from Swarthmore College

Non-scientific Interests: Cooking; gardening; music; bothering my students; forcing my daughters to practice their instruments

I first became interested in understanding the molecular mechanics of biological processes in college when I worked with Judy Voet and Nancy Hamlett studying the enzyme mercuric reductase. I then went to Harvard for graduate school, specifically to work with the great enzymologist Jeremy Knowles (who, sadly, passed away this April). Two months after I joined Jeremy's group, he was made Dean of the Faculty and wisely decided to close down his lab. He sent me to Jack Szostak's lab (I was really given no choice in the matter), which was wonderful as I was surrounded by incredibly smart and stunningly creative people. It was in Jack's lab that I learned to embrace complexity. I first began thinking about the baroque complexities of eukaryotic translation when I was considering what to study as a postdoctoral fellow with Dan Herschlag at Stanford University. Dan was interested in trying to understand what DEAD-box proteins (RNA-dependent ATPases that were proposed to act as RNA helicases) did and how they did it. The canonical DEAD-box protein was eIF4A, a eukaryotic translation initiation factor, and I chose it as my initial subject for study. After working on eIF4A for two years, I became fascinated by the broader questions of what all of the other 24 or more proteins involved in translation initiation in eukaryotes did and how they did it. So, I set out to use the tools of mechanistic enzymology and biophysical chemistry to dissect the process and probe its molecular mechanics. Ten years later, that's what we're still up to, with no end in sight.

Read Dr. Lorsch's article entitled: Should I Stay or Should I Go? Eukaryotic Translation Initiation Factors 1 and 1A Control Start Codon Recognition

<http://www.jbc.org/cgi/content/full/283/41/27345>