Abstract

Chase Weidmann, Ph.D. has contributed broadly to the field of RNA Biology during his career, studying mechanisms of codon bias during translation, post-transcriptional regulation of mRNAs by RNA-binding proteins, the folding of long non-coding RNAs, and how RNA-protein interaction networks contribute to the function and assembly of functional RNP particles. Chase developed a chemical probing strategy and next-gen sequencing technology, called RNP-MaP, that maps the location of and cooperation between multi-protein networks on RNAs in live cells. Going forward, Chase is interested in understanding how alterations in RNA-binding protein profiles, a cell's “RBPome”, confer deleterious activities onto noncoding RNAs in human disease, especially in cancer. To further empower this work and his future research program, Chase is now generating and integrating protein mass spectrometry data into his RBPome projects.