This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platforms			
Site-directed mRNA editing to correct genetic diseases	<p>A method to site-specifically edit mRNA could be used to correct genetic mutations associated with inherited diseases. A human adenosine deaminase catalytic domain was fused to an RNA-binding protein and then expressed in cells in conjunction with an antisense RNA that the fusion protein recruits to the target mRNA sequence. In <i>Xenopus</i> extracts, injection of RNA encoding the fusion protein and an antisense RNA that targets a mutant form of the cystic fibrosis transmembrane conductance regulator (CFTR) corrected 20% of the transcripts on average. In human cells, transfection of multiple vectors encoding the system enabled the correction of a mutant form of GFP. Next steps include increasing the efficiency of the approach and testing it in zebrafish and mouse models. The study is funded by a 2013 NIH transformative R01 award.</p> <p>SciBX 6(43); doi:10.1038/scibx.2013.1242 Published online Nov. 7, 2013</p>	Patent application filed; licensing status undisclosed	<p>Montiel-Gonzalez, M.F. <i>et al. Proc. Natl. Acad. Sci. USA</i>; published online Oct. 9, 2013; doi:10.1073/pnas.1306243110</p> <p>Contact: Joshua J.C. Rosenthal, University of Puerto Rico–Medical Sciences Campus, San Juan, Puerto Rico e-mail: joshua.rosenthal@upr.edu</p>