This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platforms			
A multifunctional, aptamer-based DNA nanoassembly (AptNA) for targeted cancer therapy	<i>In vitro</i> and cell culture studies suggest AptNAs that deliver small molecule and antisense compounds could help treat cancer. <i>In vitro</i> engineering and photo cross-linking led to the production of self-assembling, acrydite-modified DNA aptamer nanoassemblies which could carry antisense oligonucleotides or cancer drugs. In cultured, drug-resistant leukemia cells, an AptNA able to bind to leukemia cells and carrying doxorubicin and an antisense oligonucleotide targeting <i>P glycoprotein</i> (<i>MDR1</i> ; <i>ABCB1</i> ; <i>P-gp</i> ; <i>CD243</i>) increased cytotoxicity compared with an AptNA carrying a random antisense oligonucleotide. Next steps include testing the AptNA system <i>in vivo</i> in a mouse model of leukemia.	Unpatented; licensing status not applicable	Wu, C. <i>et al.</i> <i>J. Am. Chem. Soc.</i> ; published online Nov. 18, 2013; doi:10.1021/ja4094617 Contact: Weihong Tan, University of Florida, Gainesville, Florida e-mail: tan@chem.ufl.edu
	SciBX 7(2); doi:10.1038/scibx.2014.68 Published online Jan. 16, 2014		