This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platforms			
Gene-specific transcriptional activation using DNA (cytosine-5-)-methyltransferase 1 (DNMT1)-RNA interactions	<p>Suppression of DNMT1-mediated gene methylation using gene-specific RNAs could provide a mechanism for activating gene expression. A DNMT1-binding, noncoding RNA sequence was identified at the <i>CCAAT enhancer binding protein-α</i> (<i>CEBPA</i>) gene that suppressed local DNA methylation and increased <i>CEBPA</i> transcription. In a genomewide survey, thousands of DNMT1-RNA interactions were discovered, suggesting this could be a previously unknown, gene-specific activating mechanism. Next steps include using clustered, regularly interspaced short palindromic repeats (CRISPR) technology to guide noncoding RNA-derived oligonucleotides to disease-suppressing genes to increase their activation.</p> <p>SciBX 6(43); doi:10.1038/scibx.2013.1241 Published online Nov. 7, 2013</p>	Patent applications filed; available for licensing	<p>Di Ruscio, A. <i>et al. Nature</i>; published online Oct. 9, 2013; doi:10.1038/nature12598</p> <p>Contact: Daniel G. Tenen, Harvard Medical School and Beth Israel Deaconess Medical Center, Boston, Mass. e-mail: daniel.tenen@nus.edu.sg</p>