This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug delivery			
Cyclodextrin-polymer nanoparticle delivery of combination siRNA payloads	<p><i>In vitro</i> and mouse studies suggest cyclodextrin-polymer nanoparticle delivery of combination siRNA payloads could help treat <i>K-Ras</i> (<i>KRAS</i>)-mutant cancers. An assay system was used to generate siRNAs with optimized potency and on-target effects. In mice with <i>K-Ras</i>-mutant tumor xenografts, nanoparticle-mediated delivery of <i>K-Ras</i>-targeting siRNA decreased tumor growth compared with a control siRNA delivery. In the xenograft mice, nanoparticle delivery of siRNA combinations to target multiple genes, including <i>K-ras</i> plus <i>phosphoinositide 3-kinase</i> (<i>PI3K</i>), prolonged tumor growth inhibition compared with delivery of individual siRNAs. Next steps include optimizing the efficiency of the siRNA molecules and nanoparticle carrier to increase half-life and target specificity.</p> <p>SciBX 7(38); doi:10.1038/scibx.2014.1135 Published online Oct. 2, 2014</p>	<p>Patent application covering the RNAi assay technology filed by Cold Spring Harbor Laboratory; licensed to Mirimus Inc.; patent application covering the nanoparticles filed by the California Institute of Technology; licensed by Avidity NanoMedicines LLC</p>	<p>Yuan, T.L. <i>et al. Cancer Res.</i>; published online Aug. 6, 2014; doi:10.1158/2159-8290.CD-13-0900 Contact: Scott W. Lowe, Memorial Sloan-Kettering Cancer Center, New York, N.Y. e-mail: lowes@mskcc.org</p>