This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platforms			
Topical delivery of small interfering RNA with spherical nucleic acid-nanoparticle conjugates	<p>Spherical nucleic acid-nanoparticle conjugates could be useful for topical delivery of siRNA to skin cells. The conjugates consisted of gold nanoparticles coated with covalently immobilized siRNA. In hairless mice, topical application of nanoparticles conjugated to <i>epidermal growth factor receptor (EGFR)</i>-targeting siRNA decreased <i>Egfr</i> mRNA levels compared with application of nanoparticles coated with nontargeting siRNA or nanoparticles plus free <i>EGFR</i>-targeting siRNA. In an <i>in vitro</i>, 3D model of human skin, nanoparticles coated with <i>EGFR</i>-targeting siRNA lowered cellular <i>EGFR</i> mRNA levels compared with nanoparticles coated with nontargeting siRNA. Next steps could include evaluating the efficacy of the siRNA-conjugated nanoparticles in various skin conditions including skin cancer.</p> <p>Study author Chad Mirkin cofounded AuraSense Therapeutics LLC to develop and commercialize therapies that use spherical nucleic acid constructs.</p> <p>SciBX 5(29); doi:10.1038/scibx.2012.773 Published online July 26, 2012</p>	Patented; licensed to AuraSense Therapeutics	<p>Zheng, D. <i>et al. Proc. Natl. Acad. Sci. USA</i>; published online July 6, 2012; doi:10.1073/pnas.1118425109</p> <p>Contact: Amy S. Paller, Northwestern University, Chicago, Ill. e-mail: apaller@northwestern.edu</p> <p>Contact: Chad A. Mirkin, same affiliation as above e-mail: chadnano@northwestern.edu</p>