This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Imaging			
Imaging to quantify lipid nanoparticle (LNP)-mediated delivery of small interfering RNAs	Combination of high-resolution light and electron microscopy (EM) could be used to quantify uptake and trafficking of LNP-delivered siRNAs. In cultured cells, quantitative image analysis of cells treated with fluorescently labeled GFP-targeting siRNAs revealed time-dependent siRNA uptake that corresponded with silencing of GFP. In cells, EM and mathematical modeling revealed an escape rate of 1%–2% for gold-labeled siRNAs from endosomes, corresponding to 2,000–4,000 molecules per cell. In cultured cells and in mice, small molecule-mediated inhibition of endosomal maturation did not affect siRNA escape, indicating that siRNAs escape from early and not mature endosomes. Next steps include identifying small molecules that impact cellular uptake of siRNAs. SciBX 6(30); doi:10.1038/scibx.2013.810 Published online Aug. 8, 2013	Unpatented; licensing status not applicable	Gilleron, J. <i>et al. Nat. Biotechnol.</i>; published online June 23, 2013; doi:10.1038/nbt.2612 Contact: Marino Zerial, Max Planck Institute of Molecular Cell Biology and Genetics, Dresden, Germany e-mail: zerial@mpi-cbg.de