This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug delivery			
Nanoparticle-encapsulated delivery devices for sustained, near infrared (NIR) light-inducible release of drugs	<p>Rat studies suggest an NIR light-activated device could enable controlled, repeated, sustained drug delivery. The device incorporates a drug reservoir encapsulated by an ethylcellulose matrix containing heat-sensitive gold nanoparticles. In saline, continuous-wave NIR light or heat stimulated the nanoparticles to create a porous membrane and release drug in a sustained manner. In diabetic rats, subcutaneous implantation of the device loaded with insulin followed by activation with periodic laser pulses decreased blood glucose levels coincident with NIR light trigger compared with what was seen in saline-loaded controls or with untriggered devices. Next steps include developing formulations that can be triggered by lower laser powers to improve safety.</p> <p>SciBX 7(5); doi:10.1038/scibx.2014.154 Published online Feb. 6, 2014</p>	Patent application filed; available for licensing	<p>Timko, B.P. <i>et al. Proc. Natl. Acad. Sci. USA</i>; published online Jan. 13, 2014; doi:10.1073/pnas.1322651111</p> <p>Contact: Daniel S. Kohane, Boston Children's Hospital, Boston, Mass. e-mail: daniel.kohane@childrens.harvard.edu</p>