This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platforms			
Mesoporous silica-coated upconversion fluorescent nanoparticles (UCNs) as a photodynamic therapy agent for cancer	<p>Mouse studies suggest UCNs could be photosensitizers that enable photodynamic therapy in deep tissue, which could be used to help treat cancer. UCNs were synthesized by coating NaYF₄-based nanoparticles with mesoporous silica, resulting in particles that emitted visible light in response to stimulation with deeper tissue-penetrating near-infrared light. In a mouse model of melanoma, intratumoral injection of UCNs conjugated to two photosensitizer dyes followed by near-infrared irradiation decreased tumor growth compared with intratumoral injection of vehicle with no irradiation. Next steps include additional preclinical efficacy studies in small and large animal models of cancer and preclinical toxicology studies.</p> <p>SciBX 5(41); doi:10.1038/scibx.2012.1097 Published online Oct. 18, 2012</p>	Patented; unavailable for licensing	<p>Idris, N.M. <i>et al. Nat. Med.</i>; published online Sept. 16, 2012; doi:10.1038/nm.2933 Contact: Yong Zhang, National University of Singapore, Singapore e-mail: biezy@nus.edu.sg</p>