This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug delivery			
Staggered lamellae nanostructures for drug delivery	<p>Staggered lamellae polyprodrug nanostructures could be useful for drug delivery. In water and dioxane mixtures, staggered lamellae structures with spiked periphery and 300 nm diameters self-assembled from amphiphilic block copolymers made up of hydrophilic poly(ethylene glycol) (PEG) and polymerized, reduction-responsive camptothecin prodrug monomers. In HeLa cells, the lamellae nanostructures were internalized faster than disk-, sphere- or flower-like polyprodrug nanostructures and released drug under reducing conditions, which mimic tumor intracellular microenvironments. In healthy rats i.v. injected with the particles, the lamellae polyprodrug nanostructures had longer half-lives than the other nanostructures. Next steps include testing the antitumor effects of the four types of self-assembled nanostructures in mouse xenograft models.</p> <p>SciBX 6(47); doi:10.1038/scibx.2013.1366 Published online Dec. 12, 2013</p>	Patent application filed; available for licensing	<p>Hu, X. <i>et al. J. Am. Chem. Soc.</i>; published online Oct. 25, 2013; doi:10.1021/ja409686x Contact: Shiyong Liu University of Science and Technology of China, Hefei, China e-mail: sliu@ustc.edu.cn Contact: Jinming Hu, same affiliation as above e-mail: hjm85@mail.ustc.edu.cn</p>