This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platforms			
Ester and esterase chemistry for tissue-specific drug activation and imaging	<i>In vitro</i> and cell culture studies suggest engineered esterases could be used to selectively activate dyes and prodrugs for tissue-specific imaging and drug delivery. A SAR study identified an α -cyclopropyl ester resistant to cleavage by human and fruit fly cell line esterases but sensitive to a porcine liver esterase. In cultured cells and brain slices treated with α -cyclopropyl-masked fluorescent probes, expression of porcine liver esterase led to ester cleavage and fluorescent activation. In cultured cells treated with an α -cyclopropyl prodrug of a small molecule inhibitor of mitosis, expression of porcine liver esterase activated the compound and caused mitotic arrest. Next steps include testing the tolerability of local delivery of ester-blocked compounds and transgenic esterase in animals.	Patent pending; available for licensing	Tian, L. <i>et al. Proc. Natl. Acad. Sci. USA</i> ; published online March 12, 2012; doi:10.1073/pnas.1111943109 Contact: Luke D. Lavis, Howard Hughes Medical Institute Janelia Farm Research Campus, Ashburn, Va. e-mail: lavisl@janelia.hhmi.org
	SciBX 5(13); doi:10.1038/scibx.2012.349 Published online March 29, 2012		