This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Imaging			
Secondary Cherenkov-induced fluorescence imaging (SCIFI) to detect markers of disease activity	<p>Mouse studies suggest SCIFI could help detect and monitor markers of disease activity. SCIFI relies on the interaction between radionuclides and fluorescent nanoparticles, which generates secondary Cherenkov fluorescent signals that can be detected by their signal-to-noise ratios, which are greater than those produced by conventional fluorescent imaging. In mice with breast cancer xenografts, SCIFI selectively and noninvasively visualized tumors bound by both a radiolabeled HER2 (EGFR2; ErbB2; neu) mAb and an integrin $\alpha_v\beta_3$ (CD51/CD61)-binding fluorescent quantum dot. In mice with matrix metalloproteinase 2 (MMP2)-overexpressing tumors, SCIFI visualized MMP2 activity at tumors by detecting the interaction of ^{18}F-labeled fluorodeoxyglucose with a fluorescent nanoparticle activated by cleavage by MMP2. Next steps include toxicity studies of potential imaging agents.</p> <p>SciBX 6(38); doi:10.1038/scibx.2013.1082 Published online Oct. 3, 2013</p>	Findings unpatented; unavailable for licensing	<p>Thorek, D.L.J. <i>et al. Nat. Med.</i>; published online Sept. 8, 2013; doi:10.1038/nm.3323</p> <p>Contact: Jan Grimm, Memorial Sloan-Kettering Cancer Center, New York, N.Y. e-mail: grimmj@mskcc.org</p>