This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Markers			
Brain metastasis markers in epithelial cell adhesion molecule (EpCAM) ⁺ circulating tumor cells (CTCs)	<p>A protein signature specific to EpCAM⁺ CTCs could be used for early detection of brain metastasis in patients with breast cancer. EpCAM⁺ CTCs were isolated from patients with breast cancer, and a subset of the cells that overexpressed <i>HER2</i> (<i>EGFR2</i>; <i>ErbB2</i>; <i>neu</i>), <i>epidermal growth factor receptor</i> (<i>EGFR</i>), <i>heparanase</i> (<i>HPSE</i>) and <i>Notch 1</i> (<i>NOTCH1</i>) was used to generate stable cell lines. In immunodeficient mice, injection of cells taken from such cell lines led to brain metastases in 60%–80% of the animals, whereas only 0%–20% of those injected with CTCs that did not express the protein signature had brain metastases. Researchers did not disclose next steps, which could include confirming the signature in larger patient populations and determining the therapeutic potential of targeting HPSE, which has previously been associated with brain metastasis.</p> <p>SciBX 6(19); doi:10.1038/scibx.2013.476 Published online May 16, 2013</p>	Patent and licensing status undisclosed	<p>Zhang, L. <i>et al. Sci. Transl. Med.</i>; published online April 10, 2013; doi:10.1126/scitranslmed.3005109 Contact: Dario Marchetti, Baylor College of Medicine, Houston, Texas e-mail: marchett@bcm.edu</p>