This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Assays & screens			
Circulating tumor cell (CTC) drug susceptibility screening to predict patient response	<p><i>In vitro</i> and mouse studies suggest CTCs could be screened to help identify tumor drug sensitivity. CTCs were isolated from patient blood samples and cultured as tumor spheres to generate CTC lines. In CTC lines derived from six patients with metastatic estrogen receptor-positive breast cancers that progressed while on therapy or did not respond, RNA sequencing identified acquired mutations not present in the primary tumor. In CTCs with phosphoinositide 3-kinase catalytic subunit α-polypeptide (PIK3CA; p110α) and HER2 (EGFR2; ErbB2; neu) mutations, treatment with PI3KCA and HER2 inhibitors in combination or as monotherapies decreased growth in culture and in xenograft mouse models compared with vehicle treatment. Next steps include improving the culture conditions so that CTCs from all patients with breast cancer can be grown in culture and testing the screen in other forms of cancer.</p> <p>SciBX 7(30); doi:10.1038/scibx.2014.903 Published online Aug. 7, 2014</p>	Patented by Johnson & Johnson; unavailable for licensing	<p>Yu, M. <i>et al. Science</i>; published online July 11, 2014; doi:10.1126/science.1253533 Contact: Daniel A. Haber, Massachusetts General Hospital Cancer Center, Charlestown, Mass. e-mail: haber@helix.mgh.harvard.edu Contact: Shyamala Maheswaran, same affiliation as above e-mail: maheswaran@helix.mgh.harvard.edu</p>