This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Disease models			
Bioengineered, implantable scaffolds that recapitulate the human metastatic bone marrow microenvironment	<p>Bioengineered, implantable hydrogel scaffolds that mimic the human metastatic bone marrow microenvironment could help identify new targets and compounds to prevent cancer metastasis to the bone. The hydrogel scaffolds were subcutaneously implanted into mice carrying primary prostate tumors to capture circulating tumor cells (CTCs) and then transplanted into recipient mice to recapitulate metastatic growth independent of primary tumors. In mice implanted with the CTC-seeded scaffolds, gene expression analysis showed that stromal factors including IL-1β were upregulated versus those in mice given unseeded scaffolds. In mice implanted with the CTC-seeded scaffold, IL-1 receptor antagonist (IL-1RA) decreased the frequency of metastatic growths within the scaffold compared with vehicle. Next steps could include using the scaffolds to identify additional factors that could promote bone metastasis in prostate and other types of cancer.</p> <p>SciBX 7(45); doi:10.1038/scibx.2014.1328 Published online Nov. 20, 2014</p>	Patent and licensing status unavailable	<p>Bersani, F. <i>et al. Cancer Res.</i>; published online Oct. 22, 2014; doi:10.1158/0008-5472.CAN-14-1809 Contact: Daniel A. Haber, Massachusetts General Hospital, Charlestown, Mass. e-mail: haber@helix.mgh.harvard.edu</p>