This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Imaging			
Magnetic resonance spectroscopy (MRS) of hyperpolarized ($^2\text{H}, ^{13}\text{C}$)-labeled glucose to detect tumor response to drug treatment	<p>Mouse studies suggest MRS using a hyperpolarized ($^2\text{H}, ^{13}\text{C}$)-labeled glucose probe could help detect tumor responses to drug treatment. In mouse models of T cell lymphoma and lung cancer, MRS using the probe detected the glycolysis product ($^2\text{H}, ^{13}\text{C}$)-labeled lactate in tumors within 15 seconds but not in normal tissues. In chemotherapy-treated mouse models of T cell lymphoma, MRS using the probe showed that the intratumoral ratio of lactate to glucose signals decreased by 62% 24 hours after treatment compared with no treatment. Planned work includes comparing the sensitivity of the method and ^{18}F-labeled fluorodeoxyglucose PET imaging in tumor models.</p> <p>SciBX 7(3); doi:10.1038/scibx.2014.103 Published online Jan. 23, 2014</p>	Unpatented; unlicensed	<p>Rodrigues, T.B. <i>et al. Nat. Med.</i>; published online Dec. 8, 2013; doi:10.1038/nm.3416 Contact: Kevin M. Brindle, University of Cambridge, Cambridge, U.K. e-mail: kmb1001@cam.ac.uk</p>