This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platforms			
CD8 ⁺ T cells that express phosphopeptide-targeted T cell receptor (TCR) to treat cancer	<p>Mouse studies suggest CD8⁺ T cells expressing TCRs that engage with phosphopeptide antigens could help treat various cancers. Levels of insulin receptor substrate 2 (IRS2) and/or cell division cycle 25B (CDC25B) are associated with cancer cell survival in multiple tumor types. Human CD8⁺ T cells were engineered to express TCRs that targeted a phosphorylated 9-mer peptide from IRS2 or one from CDC25B. In a mouse model of melanoma, infusion of the immunostimulatory cytokine IL-2 plus one or both types of CD8⁺ T cells expressing the phosphopeptide-targeted TCRs decreased tumor growth and increased tumor-free survival compared with infusion of IL-2 alone. Next steps could include evaluating the modified CD8⁺ T cells in additional mouse models of cancer.</p> <p>SciBX 7(44); doi:10.1038/scibx.2014.1302 Published online Nov. 13, 2014</p>	Patent and licensing status unavailable	<p>Zarling, A.L. <i>et al. Cancer Res.</i>; published online Oct. 8, 2014; doi:10.1158/0008-5472.CAN-14-0043 Contact: Victor H. Engelhard, University of Virginia, Charlottesville, Va. e-mail: vhe@virginia.edu</p>