This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Assays & screens			
Clustered, regularly interspaced short palindromic repeats (CRISPR)-based genome-wide screening platform	<p><i>In vitro</i> studies suggest CRISPR could be used for large-scale genetic screens in mammalian cells. Pools of lentivirus expressing Cas9 nuclease, a single guide DNA and a selection marker were used to generate a library of knockout cells. In a CRISPR library targeting 18,080 genes, a negative selection screen identified genes required for melanoma cell survival, and a positive selection screen identified genes, including those not found through shRNA screening, whose knockout resulted in resistance to BRAF inhibition. In both haploid and diploid human leukemia cells, positive and negative selection screens with a CRISPR library targeting 7,114 genes also identified genes whose loss caused resistance to drug-induced cell death. Next steps include using the screens to identify new therapeutic targets.</p> <p>SciBX 7(3); doi:10.1038/scibx.2014.98 Published online Jan. 23, 2014</p>	<p>Patent application filed for findings in first study; available for licensing</p> <p>Patent and licensing status unavailable for findings in second study</p>	<p>Shalem, O. <i>et al. Science</i>; published online Dec. 12, 2013; doi:10.1126/science.1247005 Contact: Feng Zhang, Broad Institute of MIT and Harvard, Cambridge, Mass. e-mail: zhang@broadinstitute.org</p> <p>Wang, T. <i>et al. Science</i>; published online Dec. 12, 2013; doi:10.1126/science.1246981 Contact: Eric S. Lander, Broad Institute of MIT and Harvard, Cambridge, Mass. e-mail: lander@broadinstitute.org Contact: David M. Sabatini, Massachusetts Institute of Technology, Cambridge, Mass. e-mail: sabatini@wi.mit.edu</p>