This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platforms			
Universal, chimeric antigen receptor (CAR)-based T cell therapy using zinc finger nuclease (ZFN) T cell editing	<p>T cells engineered to express a CD19-specific CAR and lack major histocompatibility complex class I A (HLA-A) could be used as a universal therapy to treat CD19⁺ cancers. Allogeneic, CAR-based T cell therapies are limited because of potential rejection of the engineered donor cells by the recipient.</p> <p>In human, CD19-specific CAR T cells, ZFN mRNAs were introduced by electrotransfer and shown to eliminate HLA-A expression during 50 days of coculture. The modified CD19-specific T cells evaded HLA-A-restricted cytotoxic T lymphocyte attack and maintained antitumor activity against patient-derived primary lymphoma cells. Next steps include clinical trials using CD19-specific T cells that lack T cell receptor (TCR) expression and CD19-specific T cells that lack TCR and HLA-A expression.</p> <p>SciBX 6(27); doi:10.1038/scibx.2013.708 Published online July 18, 2013</p>	<p>Patent application filed; available for licensing from The University of Texas MD Anderson Cancer Center Office of Technology Commercialization</p> <p>Contact: Emmanuelle Schuler, The University of Texas MD Anderson Cancer Center, Houston, Texas e-mail: eschuler@mdanderson.org</p>	<p>Torikai, H. <i>et al. Blood</i>; published online June 5, 2013; doi:10.1182/blood-2013-03-478255</p> <p>Contact: Laurence J.N. Cooper, The University of Texas MD Anderson Cancer Center, Houston, Texas e-mail: ljncooper@mdanderson.org</p>