This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platforms			
Mice with directed integration of human immunoglobulin transgenes to produce chimeric antibodies with fully human variable domains	<p>Transgenic mice that produce chimeric antibodies with human variable domains could be used for therapeutic antibody discovery. Previous development of transgenic mice with humanized immunoglobulins was limited by size of and random integration of human transgenes. In mouse embryonic stem cells, the entire human immunoglobulin variable-gene repertoire was inserted into the corresponding mouse loci using bacterial artificial chromosome-based targeting vectors. The resulting transgenic mice had functional immune systems that, when inoculated with human IL-6 receptor (CD126), produced antibodies with a wide range of binding affinities for the antigen. Ongoing work includes testing in clinical studies a high-affinity anti-CD126 antibody in which the mouse constant domain has been exchanged with the human constant domain.</p> <p>SciBX 7(15); doi:10.1038/scibx.2014.443 Published online April 17, 2014</p>	<p>Patented; nonexclusively licensed to Astellas Pharma Inc. to use the mice to discover human mAbs; partnership with Sanofi to discover and commercialize human mAbs; Academic VelocImmune Investigators Program established to provide academics with access to the mice</p>	<p>Macdonald, L.E. <i>et al. Proc. Natl. Acad. Sci. USA</i>; published online March 25, 2014; doi:10.1073/pnas.1323896111 Murphy, A.J. <i>et al. Proc. Natl. Acad. Sci. USA</i>; published online March 25, 2014; doi:10.1073/pnas.1324022111 Contact: Andrew J. Murphy, Regeneron Pharmaceuticals, Inc., Tarrytown, N.Y. e-mail: andrew.murphy@regeneron.com Contact: George D. Yancopoulos, same affiliation as above e-mail: george@regeneron.com</p>