This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platforms			
Production of antibody-toxin fusion immunotoxins in algae	<p><i>In vitro</i> and mouse studies suggest algae chloroplasts could be used to produce anticancer immunotoxin fusion proteins. Genetically engineered green algae chloroplasts were used to produce an immunotoxin fusion protein that combined a eukaryotic endotoxin and an antibody domain targeting B cell-specific CD22. The algae-produced immunotoxin-induced death of human B cell lymphoma cells but not normal human B or T cells. In a mouse xenograft model of human lymphoma, the algae-produced immunotoxins inhibited tumor progression and increased survival compared with the antibody domain alone. Next steps include designing a new fusion protein for testing in large animal models.</p> <p>At least six companies have antibodies targeting CD22 in Phase II testing or earlier to treat various cancers.</p> <p>SciBX 6(2); doi:10.1038/scibx.2013.48 Published online Jan. 17, 2013</p>	Patent application filed; licensed to Sapphire Energy Inc., a biofuels company	<p>Tran, M. <i>et al. Proc. Natl. Acad. Sci. USA</i>; published online Dec. 10, 2012; doi:10.1073/pnas.1214638110 Contact: Stephen P. Mayfield, University of California, San Diego, La Jolla, Calif. e-mail: smayfield@ucsd.edu</p>