This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Chemistry			
A two-step process for generating bispecific antibodies using unnatural amino acids	<p>A two-step process for generating bispecific antibodies with unnatural amino acids could help optimize production. Two distinct Fab fragments were each engineered to incorporate single unnatural p-acetylphenylalanine residues, which were then coupled to linkers and conjugated to form a bispecific antibody. The two-step approach was used to generate an antibody that targets HER2 (EGFR2; ERBB2; neu) and CD3, an epitope expressed on cytotoxic T lymphocytes. In cocultures of human peripheral blood mononuclear cells with HER2-positive and HER2-negative human breast cancer cell lines, the bispecific antibody led to selective lysis of HER2⁺ cells at picomolar concentrations. Next steps include using the approach to generate other bispecific antibodies. Amgen Inc.'s Blinatumomab, a bispecific T cell engager (BiTE) that binds CD19 and CD3, is in Phase II testing for relapsed or refractory acute lymphoblastic leukemia ALL.</p> <p>SciBX 5(23); doi:10.1038/scibx.2012.610 Published online June 7, 2012</p>	Patent and licensing status undisclosed	<p>Kim, C.H. <i>et al.</i> <i>J. Am. Chem. Soc.</i>; published online May 26, 2012; doi:10.1021/ja303904e Contact: Peter G. Schultz, The Scripps Research Institute, La Jolla, Calif. e-mail: schultz@scripps.edu Contact: Vaughn V. Smider, same affiliation as above e-mail: vvsmdier@scripps.edu</p>