This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platforms			
Asymmetrical Fc engineering to enhance antibody-dependent cellular cytotoxicity (ADCC)	<p>Antibodies engineered to asymmetrically interact with Fc γ-receptor IIIa (CD16a; FCGR3A; FcγRIIIa) could enhance ADCC. ADCC is mediated through contact of antibody Fc chains with FCGR3A on NK cells upon binding of tumor or viral antigen. In a heterodimeric Fc library, screening of 9,000 individual antibody clones identified heterodimeric human IgG1 antibodies containing asymmetrical Fc mutations that increased binding to FCGR3A and ADCC activity compared with wild-type human IgG1. In multiple mouse xenograft models of cancer, heterodimeric IgG1 variants decreased tumor size compared with normal IgG1. Next steps include enhancing ADCC activities of therapeutic antibodies that are based on Fc heterodimers such as bispecific antibodies.</p> <p>SciBX 7(3); doi:10.1038/scibx.2014.101 Published online Jan. 23, 2014</p>	Patent application filed; licensing status undisclosed	<p>Liu, Z. <i>et al. J. Biol. Chem.</i>; published online Dec. 5, 2013; doi:10.1074/jbc.M113.513366 Contact: Wei Yan, Amgen Inc., Seattle, Wash. e-mail: ywei@amgen.com Contact: Zhi Liu, same affiliation as above e-mail: liuz@amgen.com</p>