

### This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
<b>Cancer</b>				
Breast cancer	HER2 (EGFR2; ErbB2; neu)	<p><i>In vitro</i> and mouse studies suggest modified versions of the antibody-drug conjugate trastuzumab-DM1 could help treat breast cancer. The modifications to trastuzumab-DM1 included removal of the thioether succinimide functionality from the linker between the antibody and the cytotoxic agent DM1 and addition of cysteine residues to the antibody. The modifications increased stability in human plasma and increased the number of antibody-bound DM1 molecules, respectively, compared with no alterations. In a mouse model of HER2<sup>+</sup> breast cancer, two of the modified trastuzumab-DM1 conjugates decreased tumor growth and slowed tumor progression compared with the unmodified conjugate. Next steps could include toxicity studies of the modified conjugates.</p> <p>Roche's Genentech Inc. unit, Chugai Pharmaceutical Co. Ltd. and ImmunoGen Inc. market Kadcyla trastuzumab-DM1, a humanized mAb against HER2 linked to ImmunoGen's DM1 cytotoxic agent, to treat HER2<sup>+</sup> breast cancer.</p> <p><b>SciBX 7(40); doi:10.1038/scibx.2014.1172</b> Published online Oct. 16, 2014</p>	Patent and licensing status undisclosed	<p>Pillow, T.H. <i>et al. J. Med. Chem.</i>; published online Sept. 5, 2014; doi:10.1021/jm500552c</p> <p><b>Contact:</b> Jagath R. Junutula, Cellerant Therapeutics Inc., San Carlos, Calif. e-mail: <a href="mailto:jagathjr@gmail.com">jagathjr@gmail.com</a></p> <p><b>Contact:</b> Thomas H. Pillow, Genentech Inc., South San Francisco, Calif. e-mail: <a href="mailto:thomashp@gene.com">thomashp@gene.com</a></p>