

This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Cancer	HER2 (EGFR2; ERBB2; neu); neuregulin 1 (NRG1)	<p><i>In vitro</i>, mouse and patient studies suggest HER2 inhibitors could help treat EGFR inhibitor-resistant cancer. In primary and metastatic colorectal cancer patients, greater levels of HER2 or NRG1 in tumors were associated with resistance to Erbitux cetuximab and correlated with poor survival. In a panel of Erbitux-resistant human cancer cell lines, HER2 and NRG1 levels were higher than those in Erbitux-sensitive cell lines. In xenograft mice with Erbitux-resistant cancer cells, Erbitux plus Tykerb lapatinib or pertuzumab decreased tumor growth compared with Erbitux alone. Ongoing work includes additional studies in xenograft models and primary tumors.</p> <p>Eli Lilly and Co., Bristol-Myers Squibb Co. and Merck KGaA market Erbitux, a mAb targeting EGFR, to treat colorectal cancer and head and neck cancer.</p> <p>GlaxoSmithKline plc markets Tykerb/Tyverb, an inhibitor of HER2 and epidermal growth factor receptor 1 (EGFR1; HER1; ERBB1) to treat breast cancer.</p> <p>Pertuzumab (2C4; R1273; RG1273), a mAb HER dimerization inhibitor that prevents HER2 from binding to HER1, HER3 (EGFR3; ERBB3) and HER4 (EGFR4; ERBB4) from Roche's Genentech Inc. unit and Chugai Pharmaceutical Co. Ltd., is in Phase III testing to treat breast cancer, Phase II testing to treat non-small cell lung cancer (NSCLC) and Phase I testing to treat ovarian cancer.</p> <p>SciBX 4(37); doi:10.1038/scibx.2011.1036 Published online Sept. 22, 2011</p>	<p>Patent and licensing status for findings in first study unavailable</p> <p>Findings in second study unpatented; available for partnering</p>	<p>Yonesaka, K. <i>et al. Sci. Transl. Med.</i>; published online Sept. 7, 2011; doi:10.1126/scitranslmed.3002442 Contact: Kazuhiko Nakagawa, Kinki University School of Medicine, Osaka, Japan e-mail: nakagawa@med.kindai.ac.jp</p> <p>Contact: Pasi A. Jänne, Dana-Farber Cancer Institute, Brigham and Women's Hospital and Harvard Medical School, Boston, Mass. e-mail: pjanne@partners.org</p> <p>Bertotti, A. <i>et al. Cancer Discov.</i>; published online Sept. 2, 2011; doi:10.1158/2159-8290.CD-11-0109 Contact: Livio Trusolino, Institute for Cancer Research and Treatment, Torino, Italy e-mail: livio.trusolino@ircc.it</p>