This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Breast cancer	Phosphoinositide 3-kinase (PI3K); HER2 (EGFR2; ERBB2; neu); epidermal growth factor receptor 3 (EGFR3; HER3; ERBB3)	<p><i>In vitro</i> and mouse studies suggest that inhibition of PI3K could be used with HER2 or HER3 antagonists to help treat HER2-overexpressing breast cancers. In HER2-overexpressing breast cancer cells, PI3K inhibition plus anti-HER3 small interfering RNA or a HER2 antagonist led to less proliferation than any compound alone. In mice with HER2-overexpressing breast cancer xenografts, PI3K inhibition plus Tykerb or Herceptin was more effective than any agent alone at decreasing tumor growth. Next steps could include studies in additional animal models of cancer. The Genentech Inc. unit of Roche markets Herceptin trastuzumab to treat breast and gastric cancers. GlaxoSmithKline plc markets Tykerb lapatinib, an anti-HER2 mAb, to treat breast cancer. At least five companies have PI3K inhibitors in clinical development to treat breast cancer.</p> <p>SciBX 4(11); doi:10.1038/scibx.2011.304 Published online March 17, 2011</p>	Patent and licensing status unavailable	<p>Chakrabarty, A. <i>et al.</i> <i>Proc. Natl. Acad. Sci. USA</i>; published online Feb. 21, 2011; doi:10.1073/pnas.1018001108 Contact: Carlos L. Arteaga, Vanderbilt University School of Medicine, Nashville, Tenn. e-mail: carlos.artea@vanderbilt.edu</p>