This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Cancer	Epidermal growth factor receptor 3 (EGFR3; HER3; ErbB3); HER2 (EGFR2; ErbB2; neu)	<p>Patient sample and mouse studies identified oncogenic somatic mutations in <i>ERBB3</i> that could guide the use of HER2 and ErbB3 inhibitors. Whole-exome sequencing of 507 human primary tumor samples identified protein-altering somatic mutations in <i>ERBB3</i> in 12% of gastric cancers, 11% of colon cancers and sporadically in other types of cancer. In both mouse and human cell lines, <i>ERBB3</i> mutations plus <i>ErbB2</i> expression promoted oncogenic transformation, anchorage-independent growth and IL-3-independent cell survival. In a mouse model for <i>ErbB3</i> mutant leukemia, anti-ErbB3 mAbs or the anti-HER2 mAb Herceptin trastuzumab decreased disease severity and increased survival compared with a control mAb. Next steps include conducting studies to further elucidate the mechanisms by which mutant <i>ERBB3</i> drives oncogenesis.</p> <p>Roche's Genentech Inc. unit markets Herceptin to treat breast and gastric cancers.</p> <p>SciBX 6(22); doi:10.1038/scibx.2013.539 Published online June 6, 2013</p>	Patent and licensing status undisclosed	<p>Jaiswal, B.S. <i>et al. Cancer Cell</i>; published online May 13, 2013; doi:10.1016/j.ccr.2013.04.012</p> <p>Contact: Somasekar Seshagiri, Genentech Inc., South San Francisco, Calif. e-mail: sekar@gene.com</p>