This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Cancer				
Cancer	Protein kinase B (PKB; Akt); phosphoinositide 3-kinase (PI3K); epidermal growth factor receptor (EGFR)	<p><i>In vitro</i> and mouse studies suggest that inhibiting Akt and EGFR kinase could help treat cancers with PI3K and Akt hyperactivation. In a breast cancer cell line with overactive Akt, an Akt inhibitor decreased growth but increased expression and phosphorylation of pro-oncogenic EGFR kinases, suggesting that Akt inhibition alone could protect cancer cells with hyperactive PI3K and Akt signaling. In mouse models of breast and small cell lung cancers with overactive PI3K and Akt, an Akt inhibitor plus an EGFR kinase inhibitor led to tumor regression compared with either inhibitor alone. Ongoing clinical trials are testing combinations of the inhibitors.</p> <p>At least 10 companies have Akt inhibitors in clinical and preclinical testing to treat cancers.</p> <p>GlaxoSmithKline plc markets the epidermal growth factor receptor 1 (HER1; ERBB1) and HER2 (ERBB2; neu) inhibitor Tykerb lapatinib to treat breast cancer.</p> <p>SciBX 4(4); doi:10.1038/scibx.2011.100 Published online Jan. 27, 2011</p>	Findings unpatented; licensing status not applicable	<p>Chandarlapaty, S. <i>et al. Cancer Cell</i>; published online Jan. 6, 2011; doi:10.1016/j.ccr.2010.10.031</p> <p>Contact: Neal Rosen, Memorial Sloan-Kettering Cancer Center, New York, N.Y. e-mail: rosenn@mskcc.org</p>