This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Non-small cell lung cancer (NSCLC)	Epidermal growth factor receptor 1 (HER1; ERBB1); HER2 (ERBB2; neu)	<p>Studies in cells and in rats suggest that a class of dual HER1 and HER2 inhibitors could help treat drug-resistant NSCLC. Synthesis and <i>in vitro</i> testing of 10 pyrrolidine carboxamide analogs led to identification of 2 compounds that inhibited the growth of HER1- or HER2-expressing human cancer cell lines, including an NSCLC cell line resistant to selective HER1 inhibitors. In rats with HER1- or HER2-expressing tumors, both compounds reduced tumor size compared with lapatinib or no treatment. An optimized lead is in Phase I testing to treat NSCLC. GlaxoSmithKline plc markets the dual HER1 and HER2 inhibitor Tykerb lapatinib to treat breast cancer. Tykerb is in Phase III testing to treat gastric cancer and head and neck cancer, Phase II testing to treat brain metastases of breast cancer and Phase I/II testing to treat solid tumors. AstraZeneca plc's Zactima vandetanib, an inhibitor of HER1 and VEGF receptor 2 (KDR/FLK-1; VEGFR-2), is in registration to treat advanced NSCLC.</p> <p>SciBX 2(42); doi:10.1038/scibx.2009.1567 Published online Oct. 29, 2009</p>	Patented by Hanmi Pharmaceuticals Co. Ltd.; available for licensing or partnering	<p>Cha, M. <i>et al. J. Med. Chem.</i>; published online Oct. 15, 2009; doi:10.1021/jm901146p</p> <p>Contact: Maeng Sup Kim, Hanmi Research Center, Gyeonggi-do, South Korea e-mail: kims@hanmi.co.kr</p> <p>Contact: Seung Bum Park, Seoul National University, Seoul, South Korea e-mail: sbpark@snu.ac.kr</p>