This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Pancreatic cancer	Glial cell-derived neurotrophic factor (GDNF); glial cell line-derived neurotrophic factor family receptor $\alpha 1$ (GFRA1); ret proto-oncogene (RET)	<p>Studies in mice suggest that inhibiting signaling through the GDNF-GFRA1-RET pathway could help prevent pancreatic cancer from metastasizing to nervous system tissue. In a mouse model of invasive pancreatic cancer, antibody- or small hairpin RNA-mediated blockade of GDNF signaling significantly reduced cancer cell invasion of nerves compared with a control antibody or control shRNA ($p < 0.0001$ and $p < 0.001$, respectively). In a separate mouse model of invasive pancreatic cancer, an inhibitor of RET signaling reduced limb dysfunction and cancer cell invasion into nervous tissue compared with vehicle. Next steps include evaluating the effects of inhibiting signaling through the GDNF-GFRA1-RET axis in mouse models of pancreatic cancer progression.</p> <p>XL184, a spectrum selective kinase inhibitor of VEGF receptor 2 (KDR/FLK-1; VEGFR2), RET and c-Met receptor tyrosine kinase from Exelixis Inc. and Bristol-Myers Squibb Co., is in Phase III testing to treat thyroid cancer, Phase II for glioblastoma multiforme, Phase Ib/II for non-small cell lung cancer (NSCLC) and Phase I for advanced malignancies.</p> <p>MG516, a second-generation oral multitargeted kinase inhibitor from MethylGene Inc., is in preclinical development for cancer.</p> <p>SciBX 3(4); doi:10.1038/scibx.2010.116 Published online Jan. 28, 2010</p>	Work unpatented; unavailable for licensing	<p>Gil, Z. <i>et al. J. Natl. Cancer Inst.</i>; published online Jan. 12, 2010; doi:10.1093/jnci/djp456</p> <p>Contact: Ziv Gil, Tel Aviv Sourasky Medical Center, Tel Aviv, Israel e-mail: gilz@tasmc.health.gov.il</p>