This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Lung cancer	Neurotrophic tyrosine kinase receptor 1 (NTRK1; TrkA)	<p><i>In vitro</i> and mouse studies suggest TrkA inhibitors could help treat a subgroup of patients with lung cancer. In tumor samples from 91 patients with lung cancer, 3 patients carried <i>NTRK1</i> gene fusions. In noncancerous cells, expression of the gene fusions caused constitutive activation of TrkA, the protein encoded by <i>NTRK1</i>, and induced proliferation, anchorage-independent growth and tumor development when implanted in mice. In fusion-expressing cells, TrkA inhibitors including ARRY-470 blocked TrkA autophosphorylation and cell proliferation. Next steps include a clinical trial using Trk inhibitors in biomarker-selected patients.</p> <p>Array BioPharma Inc. has ARRY-470 in preclinical testing for cancer.</p> <p>Nerviano Medical Sciences s.r.l. has PHA-848125, an inhibitor of cyclin dependent kinases (CDKs) and TrkA, in Phase II testing to treat cancer.</p> <p>Amgen Inc. and Tesaro Inc. have the dual TrkA and anaplastic lymphoma kinase (ALK) inhibitor TSR-011 in Phase I/II testing to treat non-small cell lung cancer (NSCLC).</p> <p>SciBX 6(45); doi:10.1038/scibx.2013.1287 Published online Nov. 21, 2013</p>	Patent application filed; licensing status undisclosed	<p>Vaishnavi, A. <i>et al. Nat. Med.</i>; published online Oct. 27, 2013; doi:10.1038/nm.3352</p> <p>Contact: Robert C. Doebele, University of Colorado Denver School of Medicine, Aurora, Co. e-mail: robert.doebele@ucdenver.edu</p> <p>Contact: Pasi A. Jänne, Dana-Farber Cancer Institute, Boston, Mass. e-mail: pasi_janne@dfci.harvard.edu</p>