This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Breast cancer; colon cancer	Programmed cell death 1 ligand 1 (CD274 molecule; PD-L1; B7-H1)	<p>Mouse studies suggest PD-L1 inhibitors could enhance the effectiveness of radiotherapy to treat breast, colon and other cancers. In mice bearing mammary tumors, radiotherapy increased levels of Pd-l1 on tumor cells and tumor-infiltrating immune cells compared with no treatment. In mice bearing mammary or colon tumors, radiotherapy and an anti-Pd-l1 antibody decreased tumor growth compared with either therapy alone. Ongoing work includes investigating whether radiotherapy upregulates PD-L1 in other tumor types.</p> <p>Roche and its Genentech Inc. unit have RG7446 (MPDL3280A), a human mAb against PD-L1, in Phase II testing to treat non-small cell lung cancer (NSCLC) and Phase I trials to treat melanoma and other solid tumors.</p> <p>AstraZeneca plc has MEDI4726, a human IgG1 mAb targeting PD-L1, in Phase I testing for NSCLC, melanoma, colorectal cancer, rectal cancer and other solid tumors.</p> <p>Bristol-Myers Squibb Co. has BMS-936559 (MDX-1105), a human mAb against PD-L1, in Phase I trials to treat solid tumors.</p> <p>At least six companies have antibodies against programmed cell death 1 (PDCD1; PD-1; CD279) in Phase III or earlier development to treat cancer.</p> <p>SciBX 7(4); doi:10.1038/scibx.2014.114 Published online Jan. 30, 2014</p>	Unpatented; unlicensed; available for partnering	<p>Deng, L. <i>et al. J. Clin. Invest.</i>; published online Jan. 2, 2014; doi:10.1172/JCI67313</p> <p>Contact: Yang-Xin Fu, The University of Chicago, Chicago, Ill. e-mail: yfu@midway.uchicago.edu</p> <p>Contact: Ralph R. Weichselbaum, same affiliation as above e-mail: rrw@radonc.uchicago.edu</p>