This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Bladder cancer	Tuberous sclerosis complex tumor suppressor 1 (TSC1); TSC2; mammalian target of rapamycin (mTOR; FRAP; RAFT1)	<p>Genome sequencing suggests mTOR inhibitors may be most effective in patients with bladder cancer carrying <i>TSC1</i> mutations. In patients with bladder cancer enrolled in an ongoing Phase II trial of Afinitor everolimus, sequencing identified an association between <i>TSC1</i> mutations in primary tumors and treatment response. Patients harboring the <i>TSC1</i> mutations remained on everolimus longer and had a longer time to tumor recurrence than patients carrying wild-type <i>TSC1</i>. Ongoing work includes developing an assay to test for <i>TSC1</i> and <i>TSC2</i> mutations in all patients with cancer considered for enrollment in Phase I trials of cancer therapies at Memorial Sloan-Kettering Cancer Center. Afinitor, an oral mTOR inhibitor from Novartis AG, is marketed to treat brain cancer, breast cancer and neuroendocrine tumors. The drug also is in Phase III testing or earlier to treat other types of cancer.</p> <p>Torisel temsirolimus, an i.v. mTOR inhibitor from Pfizer Inc., is marketed to treat renal cancer and mantle cell lymphoma (MCL). Taltorvic ridaforolimus, a small molecule mTOR inhibitor from Ariad Pharmaceuticals Inc. and Merck & Co. Inc., received a complete response in June for treatment of sarcoma. The compound is in Phase II testing or earlier to treat other types of cancer.</p>	Unpatented; available for licensing or partnering	<p>Iyer, G. <i>et al. Science</i>; published online Aug. 23, 2012; doi:10.1126/science.1226344 Contact: Barry S. Taylor, University of California, San Francisco, Calif. e-mail: barry.taylor@ucsf.edu Contact: David B. Solit, Memorial Sloan-Kettering Cancer Center, New York, N.Y. e-mail: solitd@mskcc.org</p>
<p>SciBX 5(35); doi:10.1038/scibx.2012.919 Published online Sept. 6, 2012</p>				