This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Breast cancer	Phosphoinositide 3-kinase (PI3K); mammalian target of rapamycin (mTOR; FRAP; RAFT1); Janus kinase-2 (JAK-2)	<p><i>In vitro</i> and mouse studies suggest JAK-2 inhibitors could help increase the efficacy of PI3K and mTOR inhibitors against triple-negative breast cancer. In cancer cell lines, a dual PI3K and mTOR inhibitor increased JAK-2 expression compared with vehicle. In a mouse xenograft model of human breast cancer, a PI3K and mTOR inhibitor plus a JAK-2 inhibitor synergistically decreased tumor growth and metastasis and increased overall survival compared with either compound alone. Next steps could include testing the combination in additional animal models.</p> <p>At least 28 companies have PI3K or mTOR inhibitors in development stages ranging from preclinical to marketed to treat cancers.</p> <p>At least 10 companies have JAK-2 inhibitors in clinical and preclinical testing for various indications.</p> <p>SciBX 6(2); doi:10.1038/scibx.2013.32 Published online Jan. 17, 2013</p>	Patent and licensing status unavailable	<p>Britschgi, A. <i>et al. Cancer Res.</i>; published online Dec. 11, 2012; doi:10.1016/j.ccr.2012.10.023</p> <p>Contact: Mohamed Bentires-Alj, Friedrich Miescher Institute for Biomedical Research, Basel, Switzerland e-mail: bentires@fmi.ch</p>