This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Acute lymphoblastic leukemia (ALL)	B cell lymphoma 2 (BCL-2; BCL2); tyrosine kinase 2 (TYK2); signal transducer and activator of transcription 1 (STAT1)	<p>Mouse and cell culture studies suggest inhibiting the TYK2-STAT1-BCL2 signaling pathway could help treat T cell ALL. In mice grafted with leukemic cells from patients with T cell ALL, small interfering RNA against TYK2 in the grafted cells decreased leukemic cell viability compared with control siRNA in five of eight cases. A series of cell culture studies identified STAT1 and BCL2 as downstream mediators of TYK2. In 19 T cell ALL cell lines, pharmacological blockade of TYK2 with pan-Janus kinase inhibitors reduced ALL cell viability. Next steps could include evaluating pharmacological TYK2 inhibitors in animal models of ALL.</p> <p>Sareum Holdings plc has a TYK2 inhibitor in preclinical development to treat autoimmune diseases.</p> <p>SciBX 6(12); doi:10.1038/scibx.2013.281 Published online March 28, 2013</p>	Patent and licensing status unavailable	<p>Sanda, T. <i>et al. Cancer Discov.</i>; published online March 7, 2013; doi:10.1158/2159-8290.CD-12-0504</p> <p>Contact: A. Thomas Look, Dana-Farber Cancer Institute, Boston, Mass. e-mail: thomas_look@dfci.harvard.edu</p>