This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Acute myelogenous leukemia (AML); myelodysplastic syndrome (MDS)	BET bromodomain proteins; myeloid-lymphoid or mixed-lineage leukemia 3 (MLL3)	<p><i>In vitro</i> and mouse studies suggest BET inhibition could help treat AML with chromosome 7q deletions. In mouse hematopoietic stem and progenitor cells (HSPCs), shRNA knockdown of <i>Mll3</i>, a tumor suppressor in the chromosome 7q region that often is deleted in AML, resulted in cells that induced a leukemic phenotype when transplanted into mice. The BET inhibitor JQ1 increased survival in the mice compared with vehicle. Next steps include testing BET inhibitors in patients with AML who have 7q deletions and do not respond to current treatments.</p> <p>At least six companies have BET bromodomain inhibitors in Phase I testing to treat various cancers.</p> <p>JQ1 is a research reagent.</p> <p>SciBX 7(22); doi:10.1038/scibx.2014.635 Published online June 5, 2014</p>	Unpatented; licensing status not applicable	<p>Chen, C. <i>et al. Cancer Cell</i>; published online May 1, 2014; doi:10.1016/j.ccr.2014.03.016</p> <p>Contact: Scott W. Lowe, Memorial Sloan-Kettering Cancer Center, New York, N.Y. e-mail: lowes@mskcc.org</p>