This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Brain cancer	Neurofibromin 1 (NF1); MEK; suppressor of zeste 12 homolog (SUZ12); bromodomain containing 4 (BRD4)	<p>Human sample and mouse studies suggest combined inhibition of MEK and BRD4 could help treat patients with Ras-driven brain tumors. In samples from patients with malignant peripheral nerve sheath tumors (MPNSTs), 74% of samples with an <i>NF1</i> microdeletion also exhibited homozygous loss of <i>SUZ12</i>, resulting in enhanced histone acetylation and recruitment of bromodomain proteins to Ras-regulated genes. In mouse models of MPNSTs, combined deletion of <i>Nf1</i>, <i>p53</i> and <i>Suz12</i> accelerated tumor formation versus deletion of <i>Nf1</i> and <i>p53</i>. In the triple-mutant mice, combined treatment with a MEK inhibitor and a BRD4 inhibitor decreased tumor growth compared with either compound alone. Next steps could include testing the drug combination in xenograft mice with <i>NF1</i> microdeletions.</p> <p>At least four companies have BET bromodomain inhibitors in Phase I testing to treat various cancers.</p> <p>Pfizer Inc. has the MEK inhibitor PD-0325901 in Phase I testing to treat cancer.</p> <p>SciBX 7(36); doi:10.1038/scibx.2014.1064 Published online Sept. 18, 2014</p>	Patent and licensing status unavailable	<p>De Raedt, T. <i>et al. Nature</i>; published online Aug. 13, 2014; doi:10.1038/nature13561</p> <p>Contact: Karen Cichowski, Brigham and Women's Hospital, Boston, Mass. e-mail: kcichowski@rics.bwh.harvard.edu</p> <p>Contact: Eric Legius, Catholic University Leuven, Leuven, Belgium e-mail: eric.legius@uzleuven.be</p>