This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Prostate cancer	CREB binding protein (CREBBP; CBP); enhancer of zeste homolog 2 (EZH2); histone deacetylase (HDAC)	<i>In vitro</i> and mouse studies suggest HDAC or EZH2 inhibitors could help treat <i>PTEN</i> (<i>MMAC1</i>; <i>TEP1</i>)-deficient prostate cancers lacking CBP. CBP mutations have previously been found in some prostate cancers. In mice with <i>Pten</i> depletion, <i>Cbp</i> knockout increased prostatic intraepithelial neoplasia compared with no <i>Cbp</i> alteration. In human or mouse prostate cancer cells, siRNA-mediated <i>PTEN</i> knockdown alone or in combination with <i>CBP</i> knockdown increased levels of the methyltransferase EZH2 compared with what was seen using control siRNA. In a <i>Pten</i>^{+/-}/<i>Cbp</i>^{-/-} mouse model of prostate cancer, the histone deacetylase inhibitor panobinostat caused tumor regression. Next steps include testing HDAC or EZH2 inhibitors in patients with CBP-low, PTEN-low and EZH2-high prostate cancers. Novartis AG's panobinostat is in Phase III testing to treat various hematological malignancies. Epizyme Inc. and Eisai Co. Ltd. have the EZH2 inhibitor E7438 in Phase I/II testing to treat lymphoma. Constellation Pharmaceuticals Inc., Novartis and GlaxoSmithKline plc each have EZH2 inhibitors in discovery to treat cancer. SciBX 7(10); doi:10.1038/scibx.2014.283 Published online March 13, 2014	Findings unpatented; unavailable for licensing	Ding, L. <i>et al. Cancer Res.</i>; published online Feb. 3, 2014; doi:10.1158/0008-5472.CAN-13-1659 Contact: Haojie Huang, Mayo Clinic, Rochester, Minn. e-mail: huang.haojie@mayo.edu