This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Acute myelogenous leukemia (AML)	Glutamate-cysteine ligase catalytic subunit (GCLC); glutathione peroxidase 1 (GPX1)	<i>In vitro</i> studies suggest inhibiting glutathione metabolism could help treat AML. In CD34 ⁺ leukemia stem cells, compared with normal CD34 ⁺ hematopoietic cells, levels of both glutathione pathway regulatory proteins and oxidized glutathione were increased. In the leukemia stem cells, the natural products parthenolide and piperlongumine, which inhibit glutathione metabolism targets including GCLC and GPX1, depleted glutathione and induced cell death when given as monotherapy. In primary AML specimens, cytarabine plus parthenolide synergistically induced cell death. Next steps could include testing glutathione metabolism inhibitors in animal models of AML.	Patent and licensing status unavailable	Pei, S. <i>et al.</i> <i>J. Biol. Chem.</i> ; published online Oct. 2, 2013; doi:10.1074/jbc.M113.511170 Contact: Craig T. Jordan, University of Colorado Denver, Aurora, Co. e-mail: craig.jordan@ucdenver.edu
<i>SciBX</i> 6(45); doi:10.1038/scibx.2013.1284 Published online Nov. 21, 2013				