This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Cancer	Glutathione peroxidase 4 (GPX4)	<p><i>In vitro</i> and mouse studies suggest inhibiting GPX4 could help treat cancer by inducing ferroptosis. Ferroptosis is a form of iron-dependent, nonapoptotic cell death. In cancer cells treated with multiple small molecule inducers of ferroptosis, metabolomic and chemoproteomic profiling identified inhibition of GPX4 as a common mechanism of cell death. In mice with fibrosarcoma or oncogene-expressing fibroblast xenografts, the ferroptosis inducers inhibited tumor growth and decreased size of established tumors compared with vehicle. In a panel of cancer cell lines, renal cell carcinomas and diffuse large B cell lymphomas (DLBCLs) were especially sensitive to GPX4-mediated ferroptotic cell death. Next steps include testing the ferroptotic agents in additional cancer models.</p> <p>SciBX 7(6); doi:10.1038/scibx.2014.166 Published online Feb. 13, 2014</p>	<p>Patent applications filed covering compounds, their use in treating cancer and methods related to evaluating ferroptosis; unlicensed; availability undisclosed</p>	<p>Yang, W.S. <i>et al. Cell</i>; published online Jan. 16, 2014; doi:10.1016/j.cell.2013.12.010 Contact: Brent R. Stockwell, Columbia University, New York, N.Y. e-mail: bstockwell@columbia.edu</p>