This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Liver cancer	Toll-like receptor 4 (TLR4)	<p>Studies in mice suggest that TLR4 could potentially be targeted to prevent the synergistic effects of alcohol and HCV in promoting liver damage and tumor formation. In transgenic mice expressing the hepatocyte-specific HCV protein NS5A, lipopolysaccharide challenge caused greater liver damage and death compared with what was seen in both transgenic mice that lacked Tlr4 and nontransgenic wild-type mice. Transgenic mice also showed increased alcohol-induced liver damage and tumor formation than both transgenic mice that lacked Tlr4 and nontransgenic wild-type mice. Further studies are necessary to determine whether it is possible to target TLR4 signaling to lower the risk of developing cancer.</p> <p>At least five companies have compounds in clinical and preclinical testing that target TLR4 for various conditions.</p> <p><i>SciBX</i> 2(5); doi:10.1038/scibx.2009.182 Published online Feb. 5, 2009</p>	Findings unpatented; available for licensing	<p>Machida, K. <i>et al. Proc. Natl. Acad. Sci. USA</i>; published online Jan. 26, 2009; doi:10.1073/pnas.0807390106 Contact: Keigo Machida, University of Southern California, Los Angeles, Calif. e-mail: kmachida@usc.edu</p>