This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Cancer				
Multiple myeloma (MM)	IKAROS family zinc finger 1 (IKZF1; LYF1); IKZF3; cereblon (CRBN)	<i>In vitro</i> studies identified degradation of IKZF1 and IKZF3 as the anticancer mechanism of Revlimid lenalidomide. In MM cell lines, Revlimid upregulated expression of the CRBN ubiquitin ligase and promoted CRBN binding to the transcription factors IKZF1 and IKZF3, inducing their degradation. In MM cells, shRNA targeting CRBN or expression of a Revlimid-resistant CRBN mutant prevented Revlimid-induced degradation of IKZF1 and IKZF3. In Revlimid-sensitive MM cell lines, shRNA targeting <i>IKZF1</i> or <i>IKZF3</i> decreased cell survival compared with control shRNA. Next steps could include determining whether other IKZF1 and IKZF3 inhibitors cause teratogenicity. Celgene Corp. markets Revlimid lenalidomide to treat hematologic cancers including MM.	Patent and licensing status unavailable for both studies	Kronke, J. <i>et al. Science</i> ; published online Nov. 29, 2013; doi:10.1126/science.1244851 Contact: Benjamin L. Ebert, Brigham and Women's Hospital, Boston, Mass. e-mail: bebert@partners.org Lu, G. <i>et al. Science</i> ; published online Nov. 29, 2013; doi:10.1126/science.1244917 Contact: William G. Kaelin Jr., Dana-Farber Cancer Institute, Boston, Mass. e-mail: william_kaelin@dfci.harvard.edu
		SciBX 7(2); doi:10.1038/scibx.2014.53 Published online Jan. 16, 2014		