This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cardiovascular disease				
Diabetes	Endoplasmic reticulum to nucleus signaling 1 (ERN1; IRE1)	<p>An SAR study identified small molecule modulators of IRE1 that could be useful for treating type 2 diabetes. IRE1 has both kinase and endonuclease activities that are overactive in type 2 diabetes. <i>In vitro</i> and in cell culture, one class of IRE1 modulators decreased the protein's kinase activity but increased its endonuclease activity compared with vehicle control. A second class of compounds inhibited both the kinase and endonuclease activity of IRE1. Next steps include testing compounds from the two classes in cell culture and mouse models of type 2 diabetes and dyslipidemia.</p> <p>MannKind Corp. has compounds that inhibit IRE1 activity in preclinical development to treat multiple myeloma (MM).</p> <p>Ruga Corp. has an inhibitor of IRE1 activity in preclinical development for the same indication.</p> <p>SciBX 5(43); doi:10.1038/scibx.2012.1140 Published online Nov. 1, 2012</p>	Patent pending; available for licensing	<p>Wang, L. <i>et al. Nat. Chem. Biol.</i>; published online Oct. 21, 2012; doi:10.1038/nchembio.1094</p> <p>Contact: Dustin J. Maly, University of Washington, Seattle, Wash. e-mail: maly@chem.washington.edu</p> <p>Contact: Feroz R. Papa, University of California, San Francisco, Calif. e-mail: frpapa@medicine.ucsf.edu</p>