This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Cancer	Heat shock protein 70 (Hsp70)	<p><i>In vitro</i> studies have identified an allosteric Hsp70 inhibitor that could help treat cancer. Homology modeling was used to identify a conformation-dependent allosteric site in the nucleotide-binding domain of Hsp70 and aided the design of a site-specific 2,5'-thiodipyrimidine-derived inhibitor. In breast cancer cells, the compound increased degradation of the Hsp70-associated proteins HER2 (EGFR2; ErbB2; neu), CRAF (RAF1) and protein kinase B (PKB; PKBA; AKT; AKT1) and increased apoptosis compared with a nonspecific control compound. Next steps include improving the potency and drug-like properties of the inhibitor.</p> <p>Minneamrita Therapeutics LLC has the small molecule Hsp70 inhibitor minnelide in Phase I trials to treat GI cancer.</p> <p>SciBX 7(1); doi:10.1038/scibx.2014.8 Published online Jan. 9, 2014</p>	Patent application filed; licensing negotiations ongoing with undisclosed partners	<p>Rodina, A. <i>et al. Chem. Biol.</i>; published online Nov. 14, 2013; doi:10.1016/j.chembiol.2013.10.008</p> <p>Contact: Gabriela Chiosis, Memorial Sloan-Kettering Cancer Center, New York, N.Y. e-mail: chiosisg@mskcc.org</p> <p>Contact: Jason C. Young, McGill University, Montreal, Quebec, Canada e-mail: jason.young2@mcgill.ca</p>