This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Cancer				
Cancer	Signal transducer and activator of transcription 3 (STAT3)	<p><i>In vitro</i> and mouse studies suggest altering STAT3 splicing could help treat cancer. STAT3 promotes oncogene activation, but its alternatively spliced form, STAT3β, promotes apoptosis. In human breast cancer cell lines, an antisense oligonucleotide targeting a regulator of STAT3 alternative splicing decreased normal STAT3α expression and increased STAT3β expression and cell death compared with what was seen with knockdown of both isoforms. In a mouse xenograft model of human breast cancer, intratumoral injection of the antisense oligonucleotide caused tumor regression compared with either knockdown of both STAT3 isoforms or injection of saline controls. Next steps include developing a tumor-specific targeting method for altering STAT3 splicing. At least four companies have STAT3 inhibitors in clinical or preclinical testing to treat cancer.</p> <p>SciBX 4(42); doi:10.1038/scibx.2011.1172 Published online Oct. 27, 2011</p>	Unpatented; approach will be developed in collaboration with Isis Pharmaceuticals Inc.	<p>Zammarchi, F. <i>et al. Proc. Natl. Acad. Sci. USA</i>; published online Oct. 17, 2011; doi:10.1073/pnas.1108482108</p> <p>Contact: Luca Cartegni, Memorial Sloan-Kettering Cancer Center, New York, N.Y. e-mail: cartegni@mskcc.org</p>