This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Multiple myeloma (MM)	Signal transducer and activator of transcription 3 (STAT3)	Studies in cell culture and patient samples identified STAT3 inhibitors that could help treat MM. In a panel of human MM cell lines, the compounds decreased cell proliferation compared with vehicle and had IC₅₀ values of 2.5–10 µM. In a human MM cell line with high expression of STAT3, the inhibitors decreased STAT3 phosphorylation and increased apoptosis compared with vehicle. In bone marrow samples from patients with MM, the inhibitors decreased tumor cell viability but had no effect on nonmalignant cells from the same patient samples. Next steps could include optimizing STAT3 selectivity and testing in xenograft mouse models of MM. Isis Pharmaceuticals Inc. and AstraZeneca plc have ISIS-STAT3Rx, an antisense inhibitor of STAT3, in Phase II for various cancers. At least three other companies have STAT3 inhibitors in preclinical development. SciBX 6(39); doi:10.1038/scibx.2013.1091 Published online Oct. 10, 2013	Patent and licensing status unavailable	Page, B.D.G. <i>et al. J. Med. Chem.</i>; published online Aug. 22, 2013; doi:10.1021/jm3017255 Contact: Patrick T. Gunning, University of Toronto Mississauga, Mississauga, Ontario, Canada e-mail: patrick.gunning@utoronto.ca Contact: Suzanne Trudel, Princess Margaret Hospital, Toronto, Ontario, Canada e-mail: strudel@uhnres.utoronto.ca