This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Various				
Autoimmune disease; inflammatory disease	Mammalian target of rapamycin (mTOR; FRAP; RAFT1)	<p>A study in mice suggests that inhibiting mTOR in hematopoietic stem cells (HSCs) could help treat autoimmune and inflammatory diseases. In mouse models of autoimmune disease and toxin-induced inflammation, HSCs had hyperactivated mTOR and less function than wild-type cells. In each model, the mTOR inhibitor rapamycin decreased the HSC defects and improved disease symptoms compared with vehicle. Next steps include defining a dosing and treatment window for rapamycin in models of each disease. Pfizer Inc. markets Rapamune rapamycin (sirolimus) to prevent organ rejection in renal transplantation. At least eight other companies have mTOR inhibitors in development stages ranging from preclinical to marketed to treat cancer.</p> <p>SciBX 3(43); doi:10.1038/scibx.2010.1302 Published online Nov. 4, 2010</p>	Patent application filed covering mTOR-mediated regulation and therapeutic rejuvenation of HSCs; available for licensing	<p>Chen, C. <i>et al. J. Clin. Invest.</i>; published online Oct. 25, 2010; doi:10.1172/JCI43873</p> <p>Contact: Pan Zheng, University of Michigan, Ann Arbor, Mich. e-mail: panz@umich.edu</p> <p>Contact: Yang Liu, same affiliation as above e-mail: yangl@umich.edu</p>