This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Prostate cancer	Adrenergic receptor β_2 (ADRB2); ADRB3; muscarinic acetylcholine receptor M1 (CHRM1; HM1)	<p>Mouse studies suggest inhibiting autonomic nerve development in the tumor microenvironment could help treat and prevent prostate cancer. In mice implanted with bioluminescent human prostate cancer cells, surgical or pharmacological elimination of sympathetic nerves in the prostate or knockout of <i>ADRB2</i> and <i>ADRB3</i> prevented tumor initiation. In the mouse model, inhibition of parasympathetic neuron signaling by genetic knockout or pharmacological antagonism of <i>Chrm1</i> decreased cell invasion and metastasis compared with no inhibition. Next steps include assessing the safety and efficacy of adrenergic and muscarinic inhibitors in the indication.</p> <p>GlaxoSmithKline plc markets the ADRB2 antagonist Coreg carvedilol to treat heart failure, hypertension and myocardial infarction (MI). Pfizer Inc. and Akrimax Pharmaceuticals LLC market the ADRB2 antagonist Inderal LA propranolol to treat hypertension. At least four companies market CHRM1 antagonists to treat incontinence or drooling.</p> <p>SciBX 6(30); doi:10.1038/scibx.2013.790 Published online Aug. 8, 2013</p>	Patent application filed; available for licensing	<p>Magnon, C. <i>et al. Science</i>; published online July 12, 2013; doi:10.1126/science.1236361</p> <p>Contact: Claire Magnon, Albert Einstein College of Medicine of Yeshiva University, Bronx, N.Y. e-mail: clairemagnon1@gmail.com</p> <p>Contact: Paul S. Frenette, same affiliation as above e-mail: psfrenette@einstein.yu.edu</p>