This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Endocrine disease				
Diabetes	Serotonin (5-HT _{2C}) receptor	<p>Mouse studies suggest that increasing 5-HT_{2C} receptor activation on proopiomelanocortin (POMC) neurons could help treat diabetes. In mice, global 5-HT_{2C} receptor knockout led to impaired blood glucose in response to insulin injection compared with responses in wild-type mice or in animals expressing the 5-HT_{2C} receptor only on POMC neurons. In a mouse model of diet-induced obesity, a 5-HT_{2C} receptor agonist restored insulin and glucose tolerance in wild-type mice and in mice expressing the receptor on POMC neurons but not in mice with global 5-HT_{2C} receptor knockout. Next steps could include testing a 5-HT_{2C} receptor agonist in additional diabetes models. Arena Pharmaceuticals Inc. and Eisai Co. Ltd. have submitted an NDA for the 5-HT_{2C} receptor agonist lorcaserin to treat obesity. Proximagen Group plc's 5-HT_{2C} agonist, PRX00933, is in Phase II testing to treat obesity.</p> <p>SciBX 3(45); doi:10.1038/scibx.2010.1356 Published online Nov. 18, 2010</p>	Patent and licensing status undisclosed	<p>Xu, Y. <i>et al. Nat. Neurosci.</i>; published online Oct. 27, 2010; doi:10.1038/nn.2664 Contact: Joel K. Elmquist, The University of Texas Southwestern Medical Center at Dallas, Dallas, Texas e-mail: joel.elmquist@UTSouthwestern.edu</p>