This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Endocrine disease				
Type 1 diabetes	Mitogen-activated protein kinase 1 (MAPK1; ERK)	<p>Studies in mice suggest that activating ERK signaling in the liver could be useful for treating type 1 diabetes. In a mouse model of chemically-induced type 1 diabetes, adenoviral expression of a constitutively active ERK mutant in the liver led to increased β-cell proliferation in the pancreas and better fasting blood glucose levels compared with what was seen in mice that expressed LacZ control protein. Similar results were seen in mice with endoplasmic reticulum stress-induced β-cell loss, a second model of insulin-deficient type 1 diabetes. The peripheral and central nervous systems mediated the effects of the liver on the pancreas. Next steps include elucidating the molecular mechanisms behind hepatic ERK signaling and its role in enhancing proliferation of insulin-producing β-cells in the pancreas.</p> <p>SciBX 1(43); doi:10.1038/scibx.2008.1050 Published online Dec. 4, 2008</p>	Patent application filed in the U.S. and Japan; unlicensed	<p>Imai, J. <i>et al. Science</i>; published online Nov. 20, 2008; doi:10.1126/science.1163971</p> <p>Contact: Hideki Katagiri, Tohoku University Graduate School of Medicine, Sendai, Japan e-mail: katagiri@mail.tains.tohoku.ac.jp</p>