

This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Metabolic disease				
Gaucher's disease	Calnexin (CANX); glucocerebrosidase (GBA; GCCase); ryanodine receptor (RyR)	<p>A study in cell culture suggests that increasing calcium levels in the endoplasmic reticulum (ER) could help treat Gaucher's disease, a lysosomal storage disease caused by a deficiency in GCCase. In fibroblasts expressing a mutant GCCase, blocking calcium efflux from the ER using small interfering RNA, diltiazem or verapamil led to increased GCCase activity compared with no blockage. Also in the fibroblasts, overexpression of the calcium-regulated ER chaperone CANX resulted in greater GCCase activity than was seen in cells carrying a control expression vector ($p < 0.001$). Next steps include evaluating the effects of marketed RyR antagonists like diltiazem in patients with Gaucher's disease. Genzyme Corp. markets Cerezyme imiglucerase, a recombinant form of GCCase, to treat type I Gaucher's disease.</p> <p>Diltiazem and verapamil are generic calcium channel blockers approved for multiple cardiovascular indications.</p> <p>SciBX 3(20); doi:10.1038/scibx.2010.626 Published online May 20, 2010</p>	<p>Patent application filed covering use in lysosomal storage diseases, including Gaucher's disease; available for licensing from The Scripps Research Institute Office of Technology Development</p>	<p>Ong, D.S.T. <i>et al. Nat. Chem. Biol.</i>; published online May 9, 2010; doi:10.1038/nchembio.368 Contact: Jeffery Kelly, The Scripps Research Institute, La Jolla, Calif. e-mail: jkelly@scripps.edu</p>