

This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Endocrine disease				
Diabetes	Cyclin-dependent kinase 5 (CDK5); phosphoinositide 3-kinase (PIK3; PI3K); solute carrier family 2 (facilitated glucose transporter) member 4 (SLC2A4; GLUT4)	<i>In vitro</i> studies suggest that targeting CDK5 may help regulate glucose uptake by adipocytes and thus treat type 2 diabetes. In mouse adipocytes, insulin stimulated Cdk5 activity, and the effects could be reversed with PI3K inhibitors or the CDK inhibitor roscovitine. In the same cells, activation of Cdk5 by insulin induced GLUT4-mediated glucose uptake, and both small interfering RNA against Cdk5 or pharmaceutical inhibition of Cdk5 with roscovitine decreased cellular uptake of glucose. Next steps could include identifying CDK5-specific inhibitors. Daiichi Sankyo Co. Ltd. has <i>R</i> -roscovitine in clinical and preclinical testing to treat various cancers.	Patent and licensing status unavailable	Lalioti, V. <i>et al. Proc. Natl. Acad. Sci. USA</i> ; published online Feb. 23, 2009; doi:10.1073/pnas.0900218106 Contact: Ignacio V. Sandoval, Autonomous University of Madrid, Madrid, Spain e-mail: isandoval@cbm.uam.es
		SciBX 2(9); doi:10.1038/scibx.2009.358 Published online March 5, 2009		