

This week in therapeutics

| Indication | Target/marker/pathway | Summary | Licensing status | Publication and contact information |
|------------------------------------|--|---|--|---|
| Endocrine/metabolic disease | | | | |
| Diabetes | Calcium calmodulin-dependent protein kinase II γ (CAMK2G) | <p>Mouse studies suggest inhibiting CAMK2G could help improve hyperglycemia and insulin sensitivity in patients with type 2 diabetes. CAMK2G stimulates glucagon-induced, calcium-mediated hepatic glucose production. In three mouse models of obesity and type 2 diabetes, liver-specific inactivation of <i>Camk2g</i> improved blood glucose response and decreased hepatic glucose production and blood insulin levels compared with no <i>Camk2g</i> inactivation. In mouse livers, <i>Camk2g</i> inactivation enhanced insulin signaling through MAP kinase-activated protein kinase 2 (MAPKAPK2; MK2)-mediated activation of the eukaryotic translation initiator factor 2α kinase 3 (EIF2AK3; PERK) branch of the unfolded protein response. Next steps include developing inhibitors of MK2 and testing them in animal models of diabetes.</p> <p>The authors have cofounded Tabomedex Biosciences LLC to develop MK2 inhibitors licensed from Columbia University.</p> <p>SciBX 7(1); doi:10.1038/scibx.2014.16 Published online Jan. 9, 2014</p> | <p>Patent application filed by Columbia University; additional application in preparation covering unpublished MK2 inhibitors; licensed by Tabomedex Biosciences</p> | <p>Ozcan, L. <i>et al. Cell Metab.</i>; published online Nov. 21, 2013; doi:10.1016/j.cmet.2013.10.011 Contact: Ira Tabas, Columbia University, New York, N.Y. e-mail: iat1@columbia.edu Contact: Lale Ozcan, same affiliation as above e-mail: lo2192@columbia.edu</p> |