This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Neurology				
Alzheimer's disease (AD)	Cyclin dependent kinase 5 (CDK5); glycogen synthase kinase 3 β (GSK3B)	<p>Mouse studies suggest dual diaminothiazole CDK5 and GSK3B inhibitors could help treat AD. Diaminothiazole compounds inhibited the microtubule-associated protein-τ (MAPT; TAU; FTDP-17)-phosphorylating kinases CDK5 and GSK3B with low nanomolar potencies. In two mouse models for AD, the lead inhibitor decreased TAU phosphorylation and insoluble TAU levels compared with vehicle. The lead inhibitor also increased neuron density and improved memory. Next steps include screening and designing additional small molecule inhibitors of CDK5 and GSK3B.</p> <p>Neurim Pharmaceuticals Ltd.'s GSK3B inhibitor, Neu-120, is in Phase II testing to treat Parkinson's disease (PD).</p> <p>Eli Lilly and Co.'s GSK3B inhibitor, LY2090314, is in Phase II trials to treat pancreatic cancer and leukemia.</p> <p>DiaMedica Inc.'s DM-99, a GSK3B inhibitor, is in Phase II testing to treat diabetes.</p> <p>SciBX 6(27); doi:10.1038/scibx.2013.689 Published online July 18, 2013</p>	Unpatented; compounds available for licensing	<p>Zhang, X. <i>et al. J. Biol. Chem.</i>; published online June 4, 2013; doi:10.1074/jbc.M112.436402</p> <p>Contact: Kenneth S. Kosik, University of California, Santa Barbara, Calif. e-mail: kenneth.kosik@lifesci.ucsb.edu</p>