This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Neurology				
Neurology; nerve damage	Glycogen dependent kinase 3 (GSK3); nuclear factor of activated T-cells cytoplasmic calcineurin-dependent 3 (NFATC3; NFAT4); NFATC4 (NFAT3)	<p>A study in mice suggests that blocking NFATC3 and NFATC4 translocation could help prevent the neurotoxicity side effects associated with GSK3 inhibitors. In mice, the GSK3 inhibitor lithium increased nuclear translocation of <i>Nfatc3</i> and <i>Nfatc4</i> and neuronal apoptosis, leading to impaired motor coordination compared with vehicle. Lithium plus the <i>Nfatc3</i> and <i>Nfatc4</i> inhibitor cyclosporin A led to less lithium-associated motor impairment and neuronal apoptosis in the mice than lithium alone. Next steps could include evaluating a combination of cyclosporin A and lithium in patients. Lithium is a generic that is marketed to treat bipolar disorder.</p> <p>Cyclosporin A is an immunosuppressant used to prevent transplant rejection.</p> <p>Neu-120, a selective uncompetitive NMDAR (GRIN) modulator and monoamine oxidase B (MAO-B) and GSK3 inhibitor from Neurim Pharmaceuticals Ltd., is in Phase II testing to treat Parkinson's disease (PD).</p> <p>Nypta, a 1,2,4-thiadiazolidine-3,5-dione derivate and GSK3 inhibitor from Noscira S.A., is in Phase II testing to treat Alzheimer's disease (AD) and cognitive dysfunction.</p> <p>SciBX 3(24); doi:10.1038/scibx.2010.740 Published online June 17, 2010</p>	Patent and licensing status unavailable	<p>Gómez-Sintes, R. & Lucas, J.J. <i>J. Clin. Invest.</i>; published online June 7, 2010; doi:10.1172/JCI37873</p> <p>Contact: José J. Lucas, Center for Molecular Biology "Severo Ochoa", Spanish National Research Council/Autonomous University of Madrid, Madrid, Spain e-mail: jjlucas@cbm.uam.es</p>