This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Neurology				
Depression; mania	Kinesin light chain 2 (KLC2); glycogen synthase kinase 3 β (GSK3B); AMPA 1 glutamate receptor (GRIA1; GLUR); GRIA2 (GLUR2)	<p><i>In vitro</i> and mouse studies suggest that inhibiting GSK3B-KLC2 signaling could help treat depression and mania. In cultured murine hippocampal neurons, Klc2 activation by Gsk3b led to internalization of Glur1 and Glur2, a mechanism known to underlie long-term depression. In mouse hippocampal slices, a KLC2-derived mimic peptide led to blockade of Gsk3b-Klc2 signaling and Glur1/Glur2 internalization compared with a control peptide. In two mouse models of long-term depression and one model of mania, the peptide reduced depressive-like behavior and locomotor activity compared with a control peptide. Future studies could include identifying small molecule inhibitors of Gsk3b-Klc2 signaling.</p> <p>Neurim Pharmaceuticals Ltd.'s Neu-120, a selective uncompetitive NMDAR (GRIN) modulator and monoamine oxidase B (MAO-B) and GSK3B inhibitor, is in Phase II testing to treat Parkinson's disease (PD).</p>	Unpatented; unlicensed	<p>Du, J. <i>et al. Proc. Natl. Acad. Sci. USA</i>; published online May 31, 2010; doi:10.1073/pnas.0913138107</p> <p>Contact: Hussein K. Manji, Johnson & Johnson Pharmaceuticals Group, Titusville, N.J.</p> <p>e-mail: hmanji@its.jnj.com</p> <p>Contact: Jing Du, National Institutes of Health, Bethesda, Md.</p> <p>e-mail: duj@mail.nih.gov</p>
<p>SciBX 3(23); doi:10.1038/scibx.2010.709 Published online June 10, 2010</p>				