This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Neurology				
Pain	Adenylate cyclase 1 (ADCY1; AC1); NMDA receptor NR2B subtype (GRIN2B; NR2B)	<p>Mouse studies suggest inhibiting GRIN2B in the insular cortex of the brain could help treat neuropathic pain. In mice, surgery to induce peripheral nerve injury led to increased synaptic NMDA receptor levels in the insular cortex compared with sham surgery, and this increase was dependent on AC1 signaling. In a mouse model for neuropathic pain, microinjection of a nonspecific or GRIN2B-selective NMDA receptor antagonist into the insular cortex significantly decreased mechanical allodynia compared with microinjection of saline ($p < 0.05$). Next steps include developing more GRIN2B-selective NMDA receptor antagonists and studying the pathways that lead to upregulation of NMDA receptor expression after nerve injury.</p> <p>SciBX 6(23); doi:10.1038/scibx.2013.581 Published online June 13, 2013</p>	AC1 inhibitor patented; unavailable for licensing; available for partnering	<p>Qiu, S. <i>et al. Sci. Signal.</i>; published online May 14, 2013; doi:10.1126/scisignal.2003778 Contact: Ming-gao Zhao, Fourth Military Medical University, Xi'an, China e-mail: minggao@fmmu.edu.cn Contact: Min Zhuo, University of Toronto, Toronto, Ontario, Canada e-mail: min.zhuo@utoronto.ca</p>