This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Neurology				
Pain; spinal cord injury (SCI)	Purinergic receptor P2X ligand-gated ion channel 4 (P2RX4)	An SAR study identified P2RX4 antagonists that could be useful for treating neuropathic pain and SCI. Genetic inactivation of *P2RX4* previously has been shown to reduce inflammatory and neuropathic pain associated with SCI. In a cell culture assay, the lead compound in a series of N-substituted phenoxazines inhibited human P2RX4 with an IC_{50} value of 0.189 μM and showed 35-fold higher selectively for P2RX4 than for related receptors. Next steps include optimizing potency, selectivity and oral availability of the compounds and evaluating them in mouse models of neuropathic pain. *SciBX* 5(44); doi:10.1038/scibx.2012.1167 Published online Nov. 8, 2012	Unpatented; licensing status not applicable	Hernandez-Olmos, V. *et al. J. Med. Chem.*; published online Oct. 17, 2012; doi:10.1021/jm300845v **Contact:** Christa E. Müller, University of Bonn, Bonn, Germany e-mail: christa.mueller@uni-bonn.de