This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Neurology				
Pain	Serotonin (5-HT) receptor; tryptophan hydroxylase 2 (TPH2)	<p>A study in rats suggests that inhibiting serotonin signaling in the rostral ventromedial medulla (RVM) could help treat pain. In rats, RVM-specific small hairpin RNA-mediated knockdown of TPH2, an enzyme involved in the synthesis of neuronal serotonin, reduced serotonin signaling, which reduced formalin-induced pain response compared with that seen after control shRNA treatment ($p < 0.01$). The TPH2-targeting shRNA also reduced thermal hyperalgesia and mechanical allodynia compared with control shRNA ($p < 0.001$). Next steps include studying the role of 5-HT receptor subtypes in pain pathways and evaluating the therapeutic potential of selectively blocking these receptors.</p> <p>At least five companies have compounds targeting serotonin receptors and transporters in Phase II or earlier trials to treat pain.</p> <p>SciBX 3(26); doi:10.1038/scibx.2010.798 Published online July 1, 2010</p>	Work unpatented; licensing status not applicable	<p>Wei, F. <i>et al. J. Neurosci.</i>; published online June 23, 2010; doi:10.1523/JNEUROSCI.5389-09.2010</p> <p>Contact: Feng Wei, University of Maryland, Baltimore, Md. e-mail: fwei@umaryland.edu</p>