This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Neurology				
Nerve damage	Chemokine (C-X-C motif) receptor 4 (CXCR4; NPY3R); ferritin, heavy polypeptide 1 (FTH1; FHC)	A study in rats suggests that increasing CXCR4 activity may be useful for decreasing opioid-induced neuronal death. Opioids exert their analgesic effects by agonizing the μ -opioid receptor, but they can also impair prosurvival neuronal signaling through CXCR4. Rat primary neurons and brain tissue cultures treated with morphine showed inhibition of CXCR4 prosurvival neuronal signaling that correlated with increased expression of FHC compared with what was seen in untreated controls. Knockdown of FHC in rat brains lowered opioid-mediated inhibition of CXCR4 signaling compared with that seen in controls. Next steps include confirming the signaling pathway relationships in human cell and tissue culture studies.	Findings unpatented; licensing status not applicable	Sengupta, R. <i>et al. J. Neurosci.</i> ; published online Feb. 25, 2009; doi:10.1523/JNEUROSCI.5865-08.2009 Contact: Olimpia Meucci, Drexel University College of Medicine, Philadelphia, Pa. e-mail: omeucci@drexelmed.edu
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