

### This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
<b>Musculoskeletal disease</b>				
Bone repair	Peroxisome proliferation-activated receptor- $\gamma$ (PPARG; PPAR $\gamma$ )	<i>In vitro</i> and mouse studies suggest that inhibiting PPAR $\gamma$ could increase the bone repair capacity of mesenchymal stem cells (MSCs). <i>In vitro</i> , a PPAR $\gamma$ inhibitor promoted differentiation of human MSCs into osteoblasts with cell yields greater than those for control MSCs not given the inhibitor. In a mouse model of cranial bone damage, PPAR $\gamma$ -incubated human MSC transplants increased bone repair and decreased rejection-associated chemokine signaling compared with control MSC transplants. Future studies could include testing PPAR $\gamma$ -incubated MSC transplants in other animal models of bone repair.	Patent and licensing status unavailable	Krause, U. <i>et al. Proc. Natl. Acad. Sci. USA</i> ; published online Jan. 25, 2010; doi:10.1073/pnas.0914360107 <b>Contact:</b> Carl A. Gregory, Texas A&M Health Science Center, Temple, Texas e-mail: <a href="mailto:cgregory@medicine.tamhsc.edu">cgregory@medicine.tamhsc.edu</a>
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