

This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Musculoskeletal disease				
Osteoporosis	Low-density lipoprotein receptor-related protein 5 (LRP5); tryptophan hydroxylase 1 (TPH1)	<p>Studies in mice and in humans suggest that LRP5 agonists or TPH1 inhibitors could be useful for treating osteoporosis. <i>Lrp5</i> knockout mice had higher levels of serum serotonin and less osteoblast proliferation than wild-type mice. <i>Lrp5</i> knockouts also had higher levels of intestinal Tph1, a key enzyme in serotonin biosynthesis, than wild-type mice. Pharmacological blockade of serotonin synthesis decreased bone loss in <i>Lrp5</i> knockout mice compared with that seen in mock-treated controls. Next steps include developing nontoxic LRP5 agonists and TPH1 inhibitors and exploring the role of intestine-derived serotonin in bone growth.</p> <p>SciBX 2(1); doi:10.1038/scibx.2009.21 Published online Jan. 8, 2009</p>	Worldwide patent application filed; available for licensing	<p>Yadav, V. <i>et al. Cell</i>; published online Nov. 26, 2008; doi:10.1016/j.cell.2008.09.059 Contact: Gerard Karsenty, Columbia University, New York, N.Y. e-mail: gk2172@columbia.edu Contact: Patricia Ducey, same affiliation as above e-mail: pd2193@columbia.edu</p>