This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Musculoskeletal disease				
Osteoporosis	Sphingosine 1-phosphate receptor 3 (S1PR3; S1P3; EDG3); calcitonin receptor	<p>Mouse studies suggest antagonizing the calcitonin receptor or agonizing S1PR3 could help treat osteoporosis. In mice, knockout of the calcitonin-binding site on the calcitonin receptor increased trabecular bone thickness by increasing bone formation compared with what was seen in wild-type mice. In the calcitonin receptor-deficient mice, sphingosine 1-phosphate (S1P) concentration in bone was greater than that in wild-type controls. In a mouse model of postmenopausal osteoporosis, the S1P receptor agonist Gilenya fingolimod protected against bone loss compared with vehicle. Next steps could include developing an S1PR3-selective agonist. Mitsubishi Tanabe Pharma Corp. and Novartis AG market Gilenya to treat multiple sclerosis (MS).</p> <p>SciBX 7(44); doi:10.1038/scibx.2014.1296 Published online Nov. 13, 2014</p>	Patent and licensing status unavailable	<p>Keller, J. <i>et al. Nat. Commun.</i>; published online Oct. 21, 2014; doi:10.1038/ncomms6215 Contact: Michael Amling, University Medical Center Hamburg-Eppendorf, Hamburg, Germany e-mail: amling@uke.de</p>