This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Musculoskeletal disease				
Osteoporosis	Sphingosine 1-phosphate (S1P); S1P receptor (S1PR1; S1PR)	<p>Studies in cell culture and in mice suggest that agonizing S1PR1 could be useful for treating osteoporosis. S1P induced chemotaxis and controlled the migration of S1PR1-expressing osteoclast precursor cells <i>in vitro</i>. In mice with ovariectomy-induced osteoporosis, the S1PR agonist FTY720 decreased the number of mature osteoclasts attached to the bone surface compared with that seen using vehicle control. Next steps include determining the effect that treating patients with FTY720 will have on bone density.</p> <p>Novartis AG's fingolimod (FTY720) is in Phase III testing to treat relapsing-remitting multiple sclerosis (RRMS). Novartis licensed FTY720 from Mitsubishi Tanabe Pharma Corp.</p> <p>R3477, an S1PR agonist from Actelion Ltd. and Roche, is in Phase I testing to treat arthritis.</p> <p>SciBX 2(6); doi:10.1038/scibx.2009.236 Published online Feb. 12, 2009</p>	Unpatented; unlicensed	<p>Ishii, M. <i>et al. Nature</i>; published online Feb. 8, 2009; doi:10.1038/nature07713</p> <p>Contact: Ronald N. Germain, National Institutes of Health, Bethesda, Md. e-mail: rgermain@niaid.nih.gov</p>