This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Musculoskeletal disease				
Bone repair	Semaphorin 3A (SEMA3A)	<p>Studies in cell culture and in mice suggest SEMA3A could be useful for bone repair. In murine cell culture, <i>Sema3a</i> inhibited differentiation of bone-resorbing osteoclasts, whereas vehicle did not. <i>Sema3a</i> knockout mice had greater osteoclast levels and lower bone density than wild-type controls. In an ovariectomized mouse model of postmenopausal osteoporosis, <i>Sema3a</i> decreased osteoclast activity and increased bone volume compared with saline controls. Next steps could include formulation and preclinical development of SEMA3A for bone loss indications.</p> <p><i>SciBX</i> 5(22); doi:10.1038/scibx.2012.577 Published online May 31, 2012</p>	Patent and licensing status undisclosed	<p>Hayashi, M. <i>et al. Nature</i>; published online April 18, 2012; doi:10.1038/nature11000 Contact: Hiroshi Takayanagi, Tokyo Medical and Dental University, Tokyo, Japan e-mail: taka.csi@tmd.ac.jp</p>