This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Musculoskeletal disease				
Osteoporosis	NADPH oxidase 4 (NOX4)	<p>Studies in mice and in human samples suggest inhibiting NOX4 could help treat osteoporosis. In an ovariectomized mouse model of osteoporosis, knockout or inhibition of Nox4 with GKT137831 increased trabecular bone density compared with vehicle or no knockout and prevented bone loss. In bone material from patients with osteoporosis, NOX4 levels were higher than those in healthy controls. Next steps include clinical testing of NOX4 inhibitors to treat osteoporosis.</p> <p>Genkyotex S.A.'s NOX1 and NOX4 inhibitor, GKT137831, is in Phase II testing to treat diabetic retinopathy and preclinical testing to treat liver and pulmonary fibrosis.</p> <p>SciBX 6(45); doi:10.1038/scibx.2013.1297 Published online Nov. 21, 2013</p>	Patent application filed by Goethe University Frankfurt and Genkyotex; licensing status undisclosed	<p>Goettsch, C. <i>et al. J. Clin. Invest.</i>; published online Oct. 15, 2013; doi:10.1172/JCI67603</p> <p>Contact: Katrin Schröder, Goethe University Frankfurt, Frankfurt, Germany e-mail: schroeder@vrc.uni-frankfurt.de</p>