This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Musculoskeletal disease				
Osteoporosis	Activator protein-1 (AP-1; JUN); glucocorticoid receptor (GCCR); IL-11	<p>Studies in mice and in cell culture suggest that glucocorticoid-like compounds that don't suppress AP-1 activity could help prevent glucocorticoid-induced osteoporosis. Glucocorticoid drugs are known to induce bone loss as a side effect to their anti-inflammatory activity, but the underlying mechanism has been unclear. In mice, prednisolone-induced bone loss required GCCR expression on osteoblasts. In mouse osteoblasts, dexamethasone resulted in the binding of GCCR to AP-1, which inhibited IL-11 expression and led to reduced osteoblast differentiation compared with no treatment. Next steps include elaborating the complete gene network under the control of GCCR-mediated attenuation of osteoblast differentiation to identify further targets in glucocorticoid-induced osteoporosis.</p> <p>Prednisolone and dexamethasone are anti-inflammatory glucocorticoid drugs.</p> <p>SciBX 3(23); doi:10.1038/scibx.2010.707 Published online June 10, 2010</p>	<p>Patent status undisclosed; available for licensing from the Leibniz Institute for Age Research at the Fritz Lipmann Institute and Ascenion GmbH</p> <p>Contact: Eberhard Fritz, Fritz Lipmann Institute, Jena, Germany e-mail: efritz@fli-leibniz.de</p> <p>Contact: Mathias Bell, Ascenion GmbH, Berlin, Germany e-mail: bell@ascenion.de</p>	<p>Rauch, A. <i>et al. Cell Metab.</i>; published online June 8, 2010; doi:10.1016/j.cmet.2010.05.005</p> <p>Contact: Jan P. Tuckermann, Leibniz Institute for Age Research at the Fritz Lipmann Institute, Jena, Germany e-mail: jan@fli-leibniz.de</p>