This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Musculoskeletal disease				
Musculoskeletal disease	Adenosine A _{2A} receptor (ADORA _{2A})	<p>Mouse and cell culture studies suggest activating ADORA_{2A} could help prevent joint implant failure. Inflammation- and osteoblast-mediated bone resorption cause prostheses loosening, which leads to implant failure. In mice, an ADORA_{2A} agonist decreased particle-induced bone loss, inflammation and osteoclast numbers compared with saline. In human bone marrow samples, the agonist inhibited osteoclast differentiation. Next steps include incorporating ADORA_{2A} agonists into joint implants. Lexiscan, a short-acting ADORA_{2A} agonist from Gilead Sciences Inc. and Astellas Pharma Inc., is marketed as a cardiovascular imaging agent. CorVue binodenoson for injection, a selective ADORA_{2A} agonist from Pfizer Inc., is under review as a cardiovascular imaging agent. At least seven other companies have ADORA_{2A} agonists in Phase III testing or earlier to treat various indications.</p> <p>SciBX 5(23); doi:10.1038/scibx.2012.608 Published online June 7, 2012</p>	Patented; available for licensing	<p>Mediero, A. <i>et al. Sci. Transl. Med.</i>; published online May 23, 2012; doi:10.1126/scitranslmed.3003393 Contact: Bruce N. Cronstein, New York University School of Medicine, New York, N.Y. e-mail: bruce.cronstein@nyumc.org</p>