This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Musculoskeletal disease				
Bone repair	Integrin $\alpha 5$ (CD49e)	<i>In vitro</i> studies suggest that agonizing CD49e in human mesenchymal stem cells (hMSCs) could help treat bone disorders. In hMSCs, CD49e expression was increased during differentiation of hMSCs to osteoblasts, which are responsible for bone formation. In mice, implantation of CD49e-overexpressing hMSCs with bone-seeding particles led to more new bone formation than implantation of bone-seeded control hMSCs not overexpressing CD49e. Next steps could include testing the strategy in animal models of bone repair.	Patent and licensing status unavailable	Hamidouche, Z. <i>et al. Proc. Natl. Acad. Sci. USA</i> ; published online Oct. 12, 2009; doi:10.1073/pnas.0812334106 Contact: Pierre J. Marie, Institut National de la Santé et de la Recherche Médicale (INSERM) U606, Paris, France e-mail: pierre.marie@inserm.fr
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