

This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cardiovascular disease				
Cardiovascular disease	Nkx2.5	A small molecule library screen for chemical activators of Nkx2.5 identified a series of sulfonyl hydrazone (Shz) compounds with myocardial repair and regeneration properties that could be useful for treating cardiovascular disease. Shz triggers cardiac mRNA and protein expression in various embryonic and adult stem and progenitor cells, including human peripheral blood mononuclear cells (PBMCs). In athymic rats, engraftment of Shz-treated human PBMCs next to injured myocardium significantly improved cardiac function compared with what was seen in vehicle-treated control cells after days 7, 14 and 21 ($p=0.00183$, $p=0.00023$ and $p=0.00024$, respectively). Next steps include testing Shzs and Shz-treated cells in a rodent model of coronary artery occlusion.	Patent application filed covering the series of small molecule Shzs and their use as stem cell-differentiating agents to enhance tissue repair after injury; unlicensed	Sadek, H. <i>et al. Proc. Natl. Acad. Sci. USA</i> ; published online April 14, 2008; doi:10.1073/pnas.0711507105 Contact: Jay W. Schneider, University of Texas Southwestern Medical Center, Dallas, Texas e-mail: jay.schneider@utsouthwestern.edu