This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platforms			
<i>In vivo</i> reprogramming of cardiac fibroblasts into cardiomyocytes	<p><i>In vivo</i> conversion of cardiac fibroblasts into cardiomyocytes could help treat heart damage. Previous studies identified three transcription factors—GATA binding protein 4 (GATA4), myocyte enhancer factor 2C (MEF2C) and T-box 5 (TBX5)—capable of reprogramming cardiac fibroblasts into cardiomyocytes. In a mouse model of myocardial infarction, intramyocardial injection of a retroviral vector expressing the 3 factors 48 hours postinjury induced fibroblast conversion to cardiomyocytes and led to an increase in cardiac function compared with vector control injection. Also in the model, co-injection of the retroviral vector plus proangiogenic and fibroblast-activating peptide thymosin β4 further improved cardiac function. Next steps include testing the approach in pigs.</p> <p>RegeneRx Biopharmaceuticals Inc.'s RGN-352, an injectable formulation of thymosin β4, is in Phase II testing to treat acute myocardial infarction.</p> <p>SciBX 5(18); doi:10.1038/scibx.2012.480 Published online May 3, 2012</p>	Patent application filed; available for licensing	<p>Qian, L. <i>et al. Nature</i>; published online April 18, 2012; doi:10.1038/nature11044 Contact: Deepak Srivastava, The J. David Gladstone Institutes, San Francisco, Calif. e-mail: dsrivastava@gladstone.ucsf.edu</p>