

This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Disease models			
A microchip platform to model heart failure	<p>A microchip platform could be used to model failing myocardium and identify molecules to prevent myocardial infarction (MI) or hypertension. The device consists of neonatal rat ventricular myocytes seeded on a fibronectin-patterned flexible silicone membrane that is cyclically stretched to induce disease phenotypes. Myocardium that underwent cyclic stretching showed pathologic changes to myocyte shape, sarcomere alignment and gene expression, and it had decreased contractile functions compared with unstretched myocardium. Next steps include using the microchip platform to test compounds currently used to treat heart failure, comparing results to those reported in animal models and the clinic, and adapting the microchip platform to include human stem cell-derived cardiomyocytes.</p> <p>SciBX 6(24); doi:10.1038/scibx.2013.609 Published online June 20, 2013</p>	Patented; licensed to TissueNetix Inc.	<p>McCain, M.L. <i>et al. Proc. Natl. Acad. Sci. USA</i>; published online May 28, 2013; doi:10.1073/pnas.1304913110 Contact: Kevin Kit Parker, Harvard University, Cambridge, Mass. e-mail: kkparker@seas.harvard.edu</p>