This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Disease models			
Microfluidic device to model IL-2-induced pulmonary edema	<p><i>In vitro</i> studies suggest a microfluidic device could be used to model pulmonary edema and identify molecules to prevent the disease. The device consists of human alveolar epithelial cells and pulmonary microvascular cells separated by a porous membrane that is subjected to mechanical strain to mimic breathing. In the chip, exposure to IL-2, a cancer therapy that causes pulmonary edema as a side effect, increased vascular permeability and fluid leak into the alveolar air space compared with no treatment. These effects were inhibited by angiotensin 1 (ANG1; ANGPT1) or a transient receptor potential vanilloid 4 (TRPV4; VRL2) inhibitor. Next steps include additional studies to confirm that data from the chips can replace animal model data.</p> <p>SciBX 5(45); doi:10.1038/scibx.2012.1190 Published online Nov. 15, 2012</p>	Patents filed; available for licensing	<p>Huh, D. <i>et al. Sci. Transl. Med.</i>; published online Nov. 11, 2012; doi:10.1126/scitranslmed.3004249 Contact: Donald E. Ingber, Harvard University, Boston, Mass. e-mail: don.ingber@wyss.harvard.edu Contact: Geraldine A. Hamilton, same affiliation as above e-mail: geraldine.hamilton@wyss.harvard.edu</p>