This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Disease models			
Bioengineered, functional cortical tissue	<p>Bioengineered, functional cortical tissue could help detect neurotoxicity and aid the discovery of therapies for neurological disorders. Composites of silk protein-based scaffolds and collagen gel matrices were seeded with different types of rat cortical neurons and glial cells and arranged into six concentric cylindrical layers representing the six layers of cortical tissue. Neurons in the culture system showed 3D axonal growth, formed functional neural networks and developed into brain-like cortical tissue. The resulting cultured cortical tissue recapitulated brain-like responses to a neurotoxin and pathological mechanical stimuli. Next steps could include evaluating the effects of drugs approved to treat neurological conditions on the 3D cortical tissue culture system.</p> <p>SciBX 7(35); doi:10.1038/scibx.2014.1054 Published online Sept. 11, 2014</p>	Patent and licensing status unavailable	<p>Tang-Schomer, M.D. <i>et al. Proc. Natl. Acad. Sci. USA</i>; published online Aug. 11, 2014; doi:10.1073/pnas.1324214111 Contact: David L. Kaplan, Tufts University, Medford, Mass. e-mail: david.kaplan@tufts.edu</p>