This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Disease models			
Primary neuron-based model of amyotrophic lateral sclerosis (ALS)	<p>A cell culture model of TAR DNA binding protein 43 (TDP-43; TARDBP)-mediated neurodegeneration could help guide development of new ALS therapies. Mutant TDP-43 is the major component of protein aggregates in ALS patients. Fluorescence microscopy of cultured rat primary cortical neurons showed that mutant TDP-43 incorrectly localized to the cell cytoplasm compared with wild-type protein ($p=0.0008$). In those neurons, higher cytoplasmic TDP-43 levels were associated with greater risk of cell and neuron death. Next steps could include using the model in high throughput screens to identify new ALS therapies.</p> <p>SciBX 3(4); doi:10.1038/scibx.2010.133 Published online Jan. 28, 2010</p>	<p>Robotic microscope technology needed to image primary neuron models of neurodegenerative disease is patented for broad applications in neurodegenerative disease and cell biology; available for licensing</p> <p>Contact: Stephen Freedman, Taube-Koret Center for Huntington's Disease Research, San Francisco, Calif. e-mail: stephenbarryfreedman@yahoo.com</p>	<p>Barmada, S.J. <i>et al. J. Neurosci.</i>; published online Jan. 13, 2010; doi:10.1523/JNEUROSCI.4988-09.2010</p> <p>Contact: Steven Finkbeiner, Gladstone Institute of Neurological Disease, San Francisco, Calif. e-mail: sfinkbeiner@gladstone.ucsf.edu</p> <p>Contact: Jane Y. Wu, Northwestern University Feinberg School of Medicine, Chicago, Ill. e-mail: jane-wu@northwestern.edu</p>