This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platforms			
Generation of metanephric nephron progenitor cells from pluripotent stem cells for 3D kidney modeling <i>in vitro</i>	<p>Induced metanephric nephron progenitor cells could help model kidney diseases. In mouse embryonic stem cells (ESCs) or human induced pluripotent stem (iPS) cells, a differentiation protocol was used to produce cells expressing metanephric nephron progenitor markers, and these cells formed renal tubules and glomeruli in culture. The protocol involved culturing cells with fibroblast growth factor 5 (FGF5), bone morphogenetic protein 4 (BMP4) and a wingless-type MMTV integration site (WNT) agonist and then inducing expression of marker genes including <i>caudal type homeobox 2</i> (CDX2) and <i>T-box 6</i> (TBX6). Next steps include creating a 3D kidney culture model by combining these cells with induced ureteric bud progenitor cells.</p> <p>SciBX 7(2); doi:10.1038/scibx.2014.70 Published online Jan. 16, 2014</p>	Patent application filed; available for licensing	<p>Taguchi, A. <i>et al. Cell Stem Cell</i>; published online Dec. 12, 2013; doi:10.1016/j.stem.2013.11.010</p> <p>Contact: Ryuichi Nishinakamura, Kumamoto University, Kumamoto, Japan e-mail: ryuichi@kumamoto-u.ac.jp</p>