This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platforms			
Pluripotent cell-derived nephron progenitor cells and self-organizing 3D structures	<p>Differentiation of pluripotent cells into nephron progenitors could help model and treat renal diseases. A three-step, <i>ex vivo</i> differentiation protocol involving culture in growth factors including activin A and bone morphogenetic protein 4 (BMP4) or a wingless-type MMTV integration site (WNT) agonist followed by fibroblast growth factor 9 (FGF9; GAF) converted human embryonic stem cells (hESCs) into nephron progenitor cells. Differentiated hESCs self-organized into nephron-forming structures <i>ex vivo</i>. The process was similar to what occurs with dissociated then reaggregated mouse embryonic kidneys. Next steps could include developing the system for nephrotoxicity screens, <i>ex vivo</i> disease modeling and the generation of transplantable organoids.</p> <p>SciBX 7(3); doi:10.1038/scibx.2014.102 Published online Jan. 23, 2014</p>	Patent and licensing status unavailable	<p>Takasato, M. <i>et al. Nat. Cell Biol.</i>; published online Dec. 15, 2013; doi:10.1038/ncb2894 Contact: M.H. Little, The University of Queensland, Brisbane, Queensland, Australia e-mail: m.little@imb.uq.edu.au</p>