

This week in techniques

| Approach | Summary | Licensing status | Publication and contact information |
|------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Drug platforms | | | |
| Differentiation of human induced pluripotent stem (iPS) cells into renal progenitor-like cells with tissue-forming potential | <p><i>In vitro</i> studies identified culture conditions that differentiated iPS cells into renal progenitor-like cells for kidney disease modeling or cell-based therapy. In iPS cell cultures, addition of bone morphogenetic protein 4 (BMP4) and fibroblast growth factor 2 (FGF2) followed by retinoic acid, activin A and BMP2 induced differentiation into cells expressing renal lineage markers. In coculture with mouse embryonic kidney cells, human iPS cell-derived renal cells from healthy individuals and patients with polycystic kidney disease (PKD) formed chimeric 3D ureteric bud structures. Next steps include testing the therapeutic potential of the method in animal models of kidney injury.</p> <p>SciBX 7(1); doi:10.1038/scibx.2014.36 Published online Jan. 9, 2014</p> | Provisional patent application filed; available for licensing | <p>Xia, Y. <i>et al. Nat. Cell Biol.</i>; published online Nov. 17, 2013; doi:10.1038/ncb2872</p> <p>Contact: Juan Carlos Izpisua Belmonte, Salk Institute for Biological Studies, La Jolla, Calif. e-mail: belmonte@salk.edu or izpisua@cmrb.eu</p> |