This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platforms			
Polar body transfer in oocytes for nuclear DNA replacement without mitochondrial DNA	<p>Polar body transfer could be used to replace nuclear DNA in an enucleated oocyte without also transferring mitochondrial DNA, which could help prevent mitochondrial diseases. Pronuclear transfer, spindle-chromosome transfer or polar body transfer was used to introduce genomic material into enucleated oocytes. After <i>in vitro</i> fertilization and transfer to female mice, oocytes generated from the three methods yielded viable pups at comparable rates. In tissue samples from these pups, high throughput DNA sequencing showed that polar body transfer led to the lowest levels of mitochondrial DNA carryover from the donor, whereas pronuclear transfer led to the highest DNA carryover. Next steps include conducting polar body transfer using human oocytes or embryos donated by subjects undergoing <i>in vitro</i> fertilization and isolating embryonic stem cells to evaluate carryover of donor mitochondria.</p> <p>SciBX 7(28); doi:10.1038/scibx.2014.845 Published online July 24, 2014</p>	Patent and licensing status undisclosed	<p>Wang, T. <i>et al. Cell</i>; published online June 19, 2014; doi:10.1016/j.cell.2014.04.042 Contact: Jianhong Zhu, Fudan University, Shanghai, China e-mail: jzhu@fudan.edu.cn Contact: Hongying Sha, same affiliation as above e-mail: shahongying@fudan.edu.cn</p>