

This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platforms			
Inducing multipotent progenitor cells from keratinocytes by depleting the tumor protein p63 (TP63; p63) $\Delta Np63$ isoform or DGCR8 microprocessor complex subunit (DGCR8)	<p><i>In vitro</i> studies suggest depleting $\Delta Np63$ or <i>DGCR8</i> in keratinocytes could induce their conversion into multipotent stem cells. In mouse or human epidermal cells, shRNA against or knockout of $\Delta Np63$ and <i>DGCR8</i> increased expression of pluripotency markers compared with control shRNA or no alteration and allowed differentiation into multiple cell types. Restoring <i>DGCR8</i> expression repressed expression of pluripotency markers. In mice, injection of green fluorescent protein-labeled $\Delta Np63$ mutant epidermal cells into blastocyst-stage embryos led to their incorporation into differentiated tissues at levels similar to those for induced pluripotent stem (iPS) cells. Next steps include using the strategy to differentiate cells for cell therapy.</p> <p>SciBX 7(7); doi:10.1038/scibx.2014.210 Published online Feb. 20, 2014</p>	Patent application filed; available for licensing	<p>Chakravarti, D. <i>et al. Proc. Natl. Acad. Sci. USA</i>; published online Jan. 21, 2014; doi:10.1073/pnas.1319743111 Contact: Elsa R. Flores, The University of Texas MD Anderson Cancer Center, Houston, Texas e-mail: elsaflores@mdanderson.org</p>