This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platforms			
Direct conversion of fibroblasts to insulin-secreting cells using DNA demethylating agents	<p><i>In vitro</i> and mouse studies suggest demethylating agents could be used to directly convert adult fibroblasts into insulin-producing cells. Adult human skin fibroblasts were exposed first to the DNA demethylating agent Vidaza azacitidine and then to a three-step pancreatic differentiation protocol to produce a population containing about 35% pancreatic cells. In culture, the converted pancreatic cells released insulin in response to glucose challenge. In mice with chemically induced diabetes, injection of the converted pancreatic cells into the spinal cord restored normal glucose levels and tolerance. Next steps include developing a protocol to produce patient-specific pancreatic cells. Celgene Corp., Pfizer Inc. and Nippon Shinyaku Co. Ltd. market the DNA methyltransferase inhibitor Vidaza azacitidine to treat myelodysplastic syndrome (MDS). Celgene and Pfizer also market the drug to treat acute myelogenous leukemia (AML).</p> <p>SciBX 6(22); doi:10.1038/scibx.2013.559 Published online June 6, 2013</p>	Patent application filed; available for licensing	<p>Pennarossa, G. <i>et al. Proc. Natl. Acad. Sci. USA</i>; published online May 21, 2013; doi:10.1073/pnas.1220637110 Contact: Tiziana A.L. Brevini, University of Milan, Milan, Italy e-mail: tiziana.brevini@unimi.it</p>