This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platforms			
Generation of endothelial colony-forming cells (ECFCs) from human pluripotent stem cells to treat ischemic cardiovascular diseases	<p>A protocol for generating cells similar to cord blood ECFCs from human pluripotent stem cells could be useful for developing cellular therapies to treat ischemic cardiovascular diseases. An <i>in vitro</i>, serum-free, one-step protocol differentiated human embryonic stem cells (hESCs) or induced pluripotent stem (iPS) cells into ECFC-like cells at yields exceeding 108 cells per starting cell. In mouse models of ischemic retinopathy, ECFC-like cell transplants integrated into host retinal tissues, formed vascular tube structures and decreased post-injury avascular area compared with vehicle. In a mouse model of hind limb ischemia, ECFC-like cell transplants promoted limb salvage with efficacy comparable to that of primary cord blood ECFC transplants. Next steps could include optimizing the protocol to speed up the generation of the ECFC-like cells.</p> <p>SciBX 7(43); doi:10.1038/scibx.2014.1277 Published online Nov. 6, 2014</p>	Patent application filed; available for licensing	<p>Prasain, N. <i>et al. Nat. Biotechnol.</i>; published online Oct. 12, 2014; doi:10.1038/nbt.3048</p> <p>Contact: Mervin C. Yoder, Indiana University School of Medicine, Indianapolis, Ind. e-mail: myoder@iu.edu</p>