This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platforms			
Protocol for differentiating human stem cells into CD34 ⁺ progenitor cells	<p>Studies in mice and in cell culture suggest that inhibition of MAP kinase kinase (MEK) plus activation of bone morphogenetic protein 4 (BMP4) could help differentiate human stem cells into CD34⁺ progenitor cells to treat cardiovascular diseases. In human embryonic and induced pluripotent stem cells, a MEK inhibitor plus a BMP4 activator led to differentiation of cells into mesodermal CD34⁺ progenitor cells that subsequently differentiated into endothelial cells. In a mouse model of ischemic limb injury, intramuscular injection of the stem cell-derived CD34⁺ progenitor cells improved recovery compared with injection of stem cell-derived CD34⁻ cells or vehicle. Next steps could include evaluating the stem cell-derived CD34⁺ progenitor cells in additional mouse models of cardiovascular disease.</p> <p>SciBX 3(41); doi:10.1038/scibx.2010.1251 Published online Oct. 21, 2010</p>	Patent and licensing status unavailable	<p>Park, S.-W. <i>et al. Blood</i>; published online Sept. 30, 2010; doi:10.1182/blood-2010-04-280719 Contact: Yong-Mahn Han, Department of Biological Sciences and Center for Stem Cell Differentiation, Daejeon, South Korea e-mail: ymhan@kaist.ac.kr</p>