This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Transplantation				
Transplant	Thrombopoietin (TPO) receptor (CD110; Mpl)	<p>Mouse studies suggest TPO mimetics or CD110 agonists could help enhance engraftment of hematopoietic stem cells (HSCs) following bone marrow transplant (BMT). In mice with ablated bone marrow, CD110 deficiency or an anti-CD110 antibody decreased megakaryocyte recruitment to HSC niches and subsequent osteoblast expansion compared with normal CD110 expression or no treatment, respectively. In mouse models for BMT, TPO pretreatment increased HSC engraftment compared with no pretreatment. Next steps could include testing marketed TPO receptor agonists in mouse models for BMT. GlaxoSmithKline plc and Ligand Pharmaceuticals Inc. market Promacta eltrombopag, a small molecule TPO receptor agonist, to treat thrombocytopenia and idiopathic thrombocytopenic purpura (ITP). The compound is under regulatory review to treat HCV and is in Phase III testing to reduce the need for platelet transfusion in patients with thrombocytopenia and chronic liver disease who are undergoing elective invasive procedures.</p> <p>Amgen Inc. and Kyowa Hakko Kirin Co. Ltd. market Nplate romiplostim, a recombinant fusion protein containing a pair of TPO receptor-binding domains, to treat ITP.</p> <p>Eisai Co. Ltd.'s avatrombopag (E5501), an oral TPO receptor agonist, is in Phase III testing to treat ITP.</p> <p>SciBX 6(23); doi:10.1038/scibx.2013.583 Published online June 13, 2013</p>	Patent and licensing status unavailable	<p>Olson, T.S. <i>et al. Blood</i>; published online May 10, 2013; doi:10.1182/blood-2012-10-463414 Contact: Edwin M. Horwitz, Children's Hospital of Philadelphia, Philadelphia, Pa. e-mail: horwitz@email.chop.edu</p>