This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Disease models			
Conditional <i>ATG6</i> autophagy related 6 homolog (<i>Becn1</i> ; <i>Atg6</i>) knockout mouse model of preterm labor	<p>Mouse studies suggest mice with conditional <i>Becn1</i> knockout could be useful as models to study preterm labor and evaluate therapeutic candidates. Mice with granulosa cell-specific conditional <i>Becn1</i> knockout showed increased levels of autophagy proteins in ovary granulosa cells and similar rates of embryo implantation but had decreased rates of pregnancy success and lower progesterone levels in mid- to late pregnancy compared with wild-type mice. In the conditional <i>Becn1</i> knockout mice, gestation periods and pregnancy success could be increased with exogenous progesterone, the standard-of-care treatment for preterm birth, compared with vehicle. Next steps could include determining autophagy mechanisms in the ovary and in the progesterone-producing placenta in humans and using the mouse model to test synthetic progestins to prevent preterm birth.</p> <p>SciBX 7(39); doi:10.1038/scibx.2014.1164 Published online Oct. 9, 2014</p>	Unpatented; licensing status not applicable	<p>Gawriluk, T.R. <i>et al. Proc. Natl. Acad. Sci. USA</i>; published online Sept. 22, 2014; doi:10.1073/pnas.1409323111 Contact: Edmund B. Rucker III, University of Kentucky, Lexington, Ky. e-mail: edmund.rucker@uky.edu</p>