This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platforms			
Targeted leukemia inhibitory factor (LIF)-loaded nanoparticles to modulate CD4 ⁺ T cell maturation for immunotherapy	Studies in mice and in cell culture suggest that cytokine-loaded nanoparticles targeting CD4 could help prevent graft rejection and treat autoimmune diseases. Avidin-coated poly(lactic-co-glycolic acid) (PLGA) nanoparticles that targeted CD4 were loaded with LIF. In mice receiving mismatched heart allografts, LIF-loaded nanoparticles significantly increased graft survival time compared with a donor-specific blood transfusion ($p < 0.01$). In <i>ex vivo</i> nonhuman primate T cell samples, LIF-loaded nanoparticles resulted in a 10-fold increase in the T _{reg} cell population that maintains peripheral self-tolerance compared with no treatment. Next steps include studying the biodistribution and pharmacokinetics of the nanoparticles and their effects on other immune cell subsets.	Patent application filed; available for licensing from the Yale University Office of Cooperative Research Contact: Hong Peng, Yale University, New Haven, Conn. e-mail: Hong.Peng@yale.edu	Park, J. <i>et al. Mol. Pharm.</i> ; published online Oct. 26, 2010; doi:10.1021/mp100203a Contact: Tarek M. Fahmy, Yale University, New Haven, Conn. e-mail: tarek.fahmy@yale.edu Contact: Su Metcalfe, University of Cambridge, Cambridge, U.K. e-mail: smm1001@cam.ac.uk
SciBX 3(46); doi:10.1038/scibx.2010.1397 Published online Dec. 2, 2010			