This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug delivery			
Nanoparticle vaccines targeted to the large intestine	<p>Nanoparticle vaccines targeted to the large intestine could help protect against mucosal infections. Poly(lactic-co-glycolic acid) (PLGA) nanoparticles encapsulating vaccinia virus antigens and adjuvants were coated with a methacrylate-based polymer to facilitate delivery of the vaccine to the large intestine and prevent premature uptake in the small intestine. In mice, oral delivery of the methacrylate-coated nanoparticle vaccines protected against intestinal and vaginal mucosal vaccinia virus challenge and induced both CD8⁺ T cell responses and vaccinia virus-specific antibody responses. Oral delivery of uncoated nanoparticle vaccines or nanoparticles that release the vaccine in the small intestine failed to confer protection and trigger an immune response. Next steps could include testing the delivery method with other vaccines.</p> <p>SciBX 5(31); doi:10.1038/scibx.2012.828 Published online Aug. 9, 2012</p>	Patent and licensing status unavailable	<p>Zhu, Q. <i>et al. Nat. Med.</i>; published online July 15, 2012; doi:10.1038/nm.2866 Contact: Jay A. Berzofsky, National Cancer Institute, Bethesda, Md. e-mail: berzofsk@helix.nih.gov</p>