This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug delivery			
Temperature-sensitive bacterial proteins for vaccine development	<p>Cell culture and mouse studies identified genes that could be used to create attenuated bacterial vaccines. As proof of principle, strains of the Gram-negative bacterium <i>Francisella tularensis</i> were generated that had an essential gene replaced with a homolog from Arctic bacteria. In mice, the resulting temperature-sensitive strains showed significantly less dissemination throughout the body than wild-type strains. Mice inoculated with the modified strains were protected from subsequent wild-type challenge compared with mice inoculated with saline control. Cell culture studies showed that the temperature sensitivity of the strains was stable and that the technique also could render <i>Mycobacterium smegmatis</i> and <i>Salmonella typhimurium</i> temperature sensitive. Next steps include modifying other bacterial pathogens.</p> <p>SciBX 3(29); doi:10.1038/scibx.2010.906 Published online July 29, 2010</p>	<p>Patent filed; available for licensing from the University of Victoria</p> <p>Contact: Candice Madalena, Innovation and Development Corp., University of Victoria, Victoria, British Columbia, Canada e-mail: Madalena@uvic.ca</p>	<p>Duplantis, B.N. <i>et al. Proc. Natl. Acad. Sci. USA</i>; published online July 7, 2010; doi:10.1073/pnas.1004119107</p> <p>Contact: Francis Nano, University of Victoria, Victoria, British Columbia, Canada e-mail: fnano@uvic.ca</p>