This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug delivery			
Inhaled drug delivery system for lung cancer treatment	<p><i>In vitro</i> and mouse studies suggest that inhaled doxorubicin plus inhibitors of two different drug-resistance mechanisms could help treat lung cancer. In human lung cancer cell lines, pulmonary delivery of liposomal doxorubicin plus antisense oligonucleotides inhibiting the multidrug resistance-associated protein ATP-binding cassette sub-family C member 1 (ABCC1; MRP; MRP1) and the antiapoptotic factor B-cell lymphoma 2 (BCL-2; BCL2) led to greater cell death than delivery of any of the components alone. In mice with human lung tumors, inhaled delivery of the liposome-based combination therapy increased tumor regression with limited toxicity to healthy tissues compared with delivery of any single component. Next steps include finding an industrial partner for commercial development. Johnson & Johnson markets Doxil liposomal doxorubicin to treat various cancers.</p> <p>SciBX 3(22); doi:10.1038/scibx.2010.686 Published online June 3, 2010</p>	Provisional patent application filed for inhalation treatment of lung disease; available for licensing	<p>Garbuzenko, O. <i>et al. Proc. Natl. Acad. Sci. USA</i>; published online May 24, 2010; doi:10.1073/pnas.1004604107 Contact: Tamara Minko, Rutgers University, Piscataway, N.J. e-mail: minko@rci.rutgers.edu</p>