This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug delivery			
Chemotherapeutic nanocapsules to increase delivered drug concentration	<p><i>In vitro</i> and mouse studies suggest that nanocapsules comprised of two different chemotherapeutics could help increase drug concentrations in tumors. A liposome-like nanocapsule consisting of an ethylene glycol-conjugated form of camptothecin was loaded with a second chemotherapeutic, doxorubicin. <i>In vitro</i>, the nanocapsules released both drugs into cancer cells, resulting in greater drug activity than was seen for unloaded nanocapsules, free doxorubicin or free camptothecin. In mice bearing intraperitoneal tumors, the nanocapsules significantly reduced tumor burden compared with saline control. Next steps could include characterization of the toxicity, pharmacokinetics and biodistribution of the nanocapsules.</p> <p>Pfizer Inc. markets Camptosar irinotecan, a derivative of camptothecin, to treat non-small cell lung cancer (NSCLC) and colorectal cancer. At least six other companies have camptothecin compounds in clinical testing to treat cancer.</p> <p>Johnson & Johnson markets Doxil doxorubicin to treat several cancers. Cephalon Inc. and Sopherion Therapeutics LLC market Myocet doxorubicin to treat breast cancer.</p> <p>SciBX 3(14); doi:10.1038/scibx.2010.450 Published online April 8, 2010</p>	Patent and licensing status unavailable	<p>Shen, Y. <i>et al. J. Am. Chem. Soc.</i>; published online March 10, 2010; doi:10.1021/ja909475m</p> <p>Contact: Youqing Shen, Zhejiang University, Hangzhou, China e-mail: shenyq@zju.edu.cn</p>