

This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug delivery			
Targeted, dual-drug liposomal nanoparticles	<p>Dual-drug liposomal nanoparticles could be useful for delivering combinations of cancer therapeutics. The liposomes were coated with folate to facilitate cancer cell targeting and loaded with Tarceva erlotinib in their hydrophobic regions and doxorubicin in their hydrophilic regions. In mouse xenograft models of triple-negative breast cancer (TNBC) and non-small cell lung cancer (NSCLC), the nanoparticles caused tumor regression, whereas targeted, single-drug nanoparticles resulted in continued tumor growth. In human TNBC and NSCLC cell lines, folate-targeted liposomes loaded with doxorubicin or cisplatin and various receptor tyrosine kinase (RTK) inhibitors generally showed greater cytotoxicity than liposomes containing single drugs. Next steps could include evaluating the liposomal nanoparticles for the delivery of additional combinations of cancer drugs.</p> <p>Astellas Pharma Inc., Chugai Pharmaceutical Co. Ltd. and Roche market the small molecule epidermal growth factor receptor (EGFR) inhibitor Tarceva to treat liver cancer, pancreatic cancer and NSCLC.</p> <p>SciBX 7(23); doi:10.1038/scibx.2014.689 Published online June 12, 2014</p>	Patent application filed; licensing status unavailable	<p>Morton, S.W. <i>et al. Sci. Signal.</i>; published online May 13, 2014; doi:10.1126/scisignal.2005261</p> <p>Contact: Paula T. Hammond, Massachusetts Institute of Technology, Cambridge, Mass. e-mail: hammond@mit.edu</p>