This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Chemistry			
Photocatalytic redox method for incorporating trifluoromethyl (CF ₃) groups into drug compounds	<p>A method of chemical synthesis could incorporate CF₃ groups into drug compounds to help improve their <i>in vivo</i> stability. CF₃ groups increase the metabolic stability of many drugs compared with their non-CF₃-containing analogs. The method used a photosensitive redox catalyst at room temperature to add CF₃ to aryl carbon structures in Lipitor atorvastatin, ibuprofen, lidocaine, a precursor of Aricept donepezil and other biologically active molecules at ≥78% yields. Ongoing work includes scaling up and optimizing the method and developing other nonphotocatalyzed methods for CF₃ incorporation.</p> <p>Pfizer Inc. markets the HMG-CoA reductase inhibitor Lipitor to treat hypercholesterolemia, stroke, coronary artery disease (CAD), myocardial infarction (MI) and other cardiovascular indications.</p> <p>Pfizer and Eisai Co. Ltd. market Aricept, a reversible acetylcholinesterase (AChE) inhibitor, to treat Alzheimer's disease (AD).</p> <p>SciBX 4(48); doi:10.1038/scibx.2011.1363 Published online Dec. 15, 2011</p>	Unpatented; unlicensed	<p>Nagib, D.A. & MacMillan, D.W.C. <i>Nature</i>; published online Dec. 8, 2011; doi:10.1038/nature10647</p> <p>Contact: David W.C. MacMillan, Princeton University, Princeton, N.J. e-mail: dmacmill@princeton.edu</p>