

This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Assays & screens			
Phage-assisted continuous evolution for identifying protein variants with therapeutic activities	Phage-assisted continuous evolution could aid the discovery of protein therapeutics. Current directed evolution techniques for generating variants of existing proteins require days to carry out a single round of mutation. In phage-assisted continuous evolution, bacteriophages were modified to select for genes encoding a protein with an activity of interest, allowing dozens of rounds of evolution to occur in a single day. In a proof-of-concept study in <i>Escherichia coli</i> , phage-assisted continuous evolution resulted in the generation of variants of an RNA polymerase with a broad range of activities. Next steps include using phage-assisted continuous evolution to discover improved variants of proteins.	Patent applications filed; available for licensing	Esevelt, K.M. <i>et al. Nature</i> ; published online April 10, 2011; doi:10.1038/nature09929 Contact: David R. Liu, Harvard University, Cambridge, Mass. e-mail: drliu@fas.harvard.edu
	<i>SciBX</i> 4(16); doi:10.1038/scibx.2011.462 Published online April 21, 2011		