This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platforms			
Computational design of live attenuated influenza strains for vaccines	<p><i>In vitro</i> and mouse studies suggest that influenza strains containing suboptimal codon pairs could be useful for live attenuated influenza vaccines. Suboptimal codon pairs are modifications to the viral genome that cause impaired translation of viral proteins, resulting in poor viral replication compared with that of wild-type strains. In cell culture, a suboptimal influenza strain had a lower rate of growth than a wild-type control strain, indicating that the genetic substitutions led to attenuation. In mice, inoculation with the attenuated strain resulted in minimal virulence while eliciting an immune response that protected animals from influenza challenge. By comparison, all mice inoculated with a wild-type strain died. Next steps include studying the attenuated influenza strain in ferret models of influenza infection.</p> <p>FluMist, a live attenuated influenza vaccine from AstraZeneca plc's MedImmune LLC unit, is marketed to prevent influenza infection.</p> <p>SciBX 3(25); doi:10.1038/scibx.2010.781 Published online June 24, 2010</p>	Findings patented; available for licensing	<p>Mueller, S. <i>et al. Nat. Biotechnol.</i>; published online June 13, 2010; doi:10.1038/nbt.1636</p> <p>Contact: Steffen Mueller, State University of New York at Stony Brook, Stony Brook, N.Y. e-mail: smueller@ms.cc.sunysb.edu</p>