

This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platforms			
MicroRNA-mediated gene silencing for vaccines	<p>miRNA-mediated gene silencing could provide a strategy for improving the safety, immunogenicity and manufacturing yield of live attenuated influenza vaccines. miRNA target sequences were engineered into the H1N1 and H5N1 genomes to create viral strains that were attenuated in humans and mice but not in chicken eggs, in which high viral titers are important for manufacturing purposes. In mice, inoculation with the H1N1 and H5N1 attenuated strains elicited a neutralizing antibody response sufficient for 100% protection from a lethal influenza challenge. Next steps include confirming the findings in additional animal models of influenza and modifying the technology to generate live attenuated strains in cell culture, in which manufacturing yields are expected to be higher than in chicken eggs. FluMist, a cold-adapted live attenuated intranasal vaccine from AstraZeneca plc subsidiary MedImmune Inc., is marketed to prevent influenza.</p> <p>SciBX 2(23); doi:10.1038/scibx.2009.960 Published online June 11, 2009</p>	<p>Patent pending; available for licensing from the Mount Sinai School of Medicine Office of Technology and Business Development Contact: Shin Kang, Mount Sinai School of Medicine, New York, N.Y. phone: 212-659-9680 e-mail: shin.kang@mssm.edu</p>	<p>Perez, J.T. <i>et al. Nat. Biotechnol.</i>; published online May 31, 2009; doi:10.1038/nbt.1542 Contact: Benjamin R. tenOever, Mount Sinai School of Medicine, New York, N.Y. e-mail: benjamin.tenoever@mssm.edu</p>