This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Neurology				
Addiction; Parkinson's disease (PD)	Nicotinic acetylcholine receptor (nAChR)	<p>Mouse studies suggest that stimulating the $\alpha 6\alpha 4\beta 2^*$ nAChR could help treat disorders characterized by disruption of the dopaminergic system, including nicotine addiction or PD. In transgenic mice expressing hypersensitive $\alpha 6\alpha 4\beta 2^*$ nAChRs, one of seven nAChR subtypes, nicotine stimulation led to hyperactivity and increased ambulatory behavior compared with what was seen in wild-type mice. In brain slices from the transgenic mice, nicotine-stimulated dopamine release was higher than that in brain slices from wild-type or $\alpha 4$-subunit knockout mice. Next steps include identifying compounds that stimulate the receptor.</p> <p>At least five companies have nAChR modulators in clinical and preclinical testing for various indications.</p> <p>SciBX 3(29); doi:10.1038/scibx.2010.900 Published online July 29, 2010</p>	Patent applications filed for the transgenic mice expressing hypersensitive nAChRs; available for licensing	<p>Drenan, R.M. <i>et al. J. Neurosci.</i>; published online July 21, 2010; doi:10.1523/JNEUROSCI.2056-10.2010 Contact: Henry A. Lester, California Institute of Technology, Pasadena, Calif. e-mail: lester@caltech.edu</p>