

This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Endocrine/metabolic disease				
Porphyria	Aminolevulinate synthase-1 (ALAS-1)	<p>Mouse studies suggest an siRNA targeting <i>ALAS-1</i> could help treat porphyria. In an inducible mouse model of acute intermittent porphyria, prophylactic i.v. infusion of a lipid nanoparticle-encapsulated siRNA targeting <i>Alas-1</i> blocked hepatic <i>Alas-1</i> expression and prevented acute attacks of porphyria, and it decreased the accumulation of neurotoxic porphyrin precursors in urine and plasma compared with i.v. infusion of control siRNA-loaded nanoparticles. In mice with established porphyria, <i>Alas-1</i>-targeting siRNA infusion protected against neuromotor decline and decreased plasma levels of neurotoxic porphyrin precursors with better efficacy than control siRNA or hemin infusion, the current standard of care. Next steps include testing alternative formulations of the siRNA in the mouse and other models.</p> <p>Alnylam Pharmaceuticals Inc. has the <i>ALAS-1</i>-targeting siRNA therapeutic ALN-AS1 in preclinical testing to treat porphyria.</p> <p>SciBX 7(22); doi:10.1038/scibx.2014.646 Published online June 5, 2014</p>	Patented by the Icahn School of Medicine at Mount Sinai and Alnylam Pharmaceuticals; exclusively licensed to Alnylam	<p>Yasuda, M. <i>et al. Proc. Natl. Acad. Sci. USA</i>; published online May 12, 2014; doi:10.1073/pnas.1406228111</p> <p>Contact: Robert J. Desnick, Icahn School of Medicine at Mount Sinai, New York, N.Y. e-mail: robert.desnick@mssm.edu</p> <p>Contact: Maria I. New, same affiliation as above e-mail: maria.new@mssm.edu</p>