This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Infectious disease				
Influenza virus	Sphingosine 1-phosphate receptor (S1PR)	<p>Studies in mice suggest that modulating S1PR could help decrease cytokine-related pulmonary tissue damage during influenza virus infection. In a mouse model of H1N1 influenza virus infection, the S1PR-binding sphingosine analog (<i>R</i>)-2-amino-4-(4-heptyloxyphenyl)-2-methylbutanol (AAL-R) lowered the release of cytokines and chemokines from dying, virus-infected cells compared with that seen in controls. Influenza-neutralizing antibody titers and the overall cytotoxic T cell response were maintained. Next steps include testing combination therapies of sphingosine analogs with antiviral drugs to simultaneously treat the virus and control infection-associated immunopathology.</p> <p>Fingolimod (FTY720), an S1PR agonist from Novartis AG, is in Phase III testing to treat relapsing-remitting multiple sclerosis (RRMS). R3477, an S1PR agonist from Actelion Ltd. and Roche, is in Phase I testing to treat arthritis.</p> <p>Sphingomab (Asonop; iSonep), a mAb against S1P from Lpath Inc., is in Phase I testing to treat cancer and age-related macular degeneration (AMD). Last year, Merck's Merck Serono S.A. division received an exclusive, worldwide license to Lpath's Asonop. <i>SciBX</i> 2(5); doi:10.1038/scibx.2009.191</p> <p>Published online Feb. 5, 2009</p>	Patent and licensing status undisclosed	<p>Marsolais, D. <i>et al. Proc. Natl. Acad. Sci. USA</i>; published online Jan. 19, 2009; doi:10.1073/pnas.0812689106</p> <p>Contact: Michael B.A. Oldstone, The Scripps Research Institute, La Jolla, Calif. e-mail: mbaobo@scripps.edu</p> <p>Contact: Hugh Rosen, same affiliation as above e-mail: hrosen@scripps.edu</p>