This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Infectious disease				
Gram-positive bacterial infection; sepsis; <i>Staphylococcus</i> ; <i>Streptococcus</i>	α -hemolysin (aHL)	Cell culture and mouse studies suggest artificial liposomes could help treat Gram-positive bacterial infections by sequestering cytolytic toxins those pathogens secrete. In cultures of human cells treated with aHL and other cytolytic bacterial toxins, a mixture of cholesterol-sphingomyelin liposomes and sphingomyelin-only liposomes bound the toxins and prevented cell lysis. In a mouse model of <i>Streptococcus pneumoniae</i> -induced pneumonia, intranasal delivery of the liposome mixture decreased disease symptoms compared with no treatment. In mouse models of <i>Streptococcus pneumoniae</i> - or <i>Staphylococcus aureus</i> -induced sepsis, the liposome mixture plus penicillin or vancomycin, respectively, increased survival compared with liposomes or antibiotic alone. Next steps include planning a clinical trial of the liposomes to treat severe pneumococcal pneumonia.	Patented; licensed to Lascco S.A.	Henry, B.D. <i>et al. Nat. Biotechnol.</i> ; published online Nov. 2, 2014; doi:10.1038/nbt.3037 Contact: Eduard B. Babiychuk, University of Bern, Bern, Switzerland e-mail: edik@ana.unibe.ch
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