

This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Infectious disease				
Bacterial infection	<i>Ixodes scapularis</i> antifreeze glycoprotein (iafgp); poly- <i>N</i> -acetyl glucosamine (PNAG)	<p>Rodent, fruit fly and cell culture studies suggest iafgp derived from the <i>I. scapularis</i> tick could help prevent and treat bacterial infections by disrupting biofilm formation. In a panel of cultured, biofilm-forming bacteria, recombinant iafgp decreased levels of the biofilm component PNAG and biofilm formation compared with no treatment. Fruit flies engineered to express iafgp showed greater resistance to infection by biofilm-producing bacteria than flies that expressed a nontick control gene. Mice engineered to express iafgp showed greater survival following intranasal challenge with methicillin-resistant <i>Staphylococcus aureus</i> than unmodified controls. Next steps could include evaluating recombinant iafgp or its peptide variants in animal models of bacterial infection.</p> <p>Alopexx Pharmaceuticals LLC and partner Sanofi have SAR279356, a human mAb against PNAG, in Phase II testing to treat bacterial infections.</p> <p>Alopexx Vaccine LLC has AV0318, a vaccine based on deacetylated PNAG, in preclinical development for the same indication.</p> <p>SciBX 7(44); doi:10.1038/scibx.2014.1294 Published online Nov. 13, 2014</p>	Patent and licensing status unavailable	<p>Heisig, M. <i>et al. Cell Rep.</i>; published online Oct. 16, 2014; doi:10.1016/j.celrep.2014.09.034 Contact: Erol Fikrig, Yale School of Medicine, New Haven, Conn. e-mail: erol.fikrig@yale.edu Contact: Martin Heisig, same affiliation as above e-mail: martin.heisig@yale.edu</p>