This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Infectious disease				
Bacterial infection	Fatty acid synthase II (FASII) pathway	<p>Studies in cell culture and in mice suggest that the antibiotic activity of FASII inhibitors could be compromised by serum fatty acids. <i>In vitro</i>, multiple Gram-positive bacteria survived treatment with the FASII inhibitors cerulenin and triclosan when the strains were cultured in the presence of Tween 80, a fatty acid-based emulsifying agent, or human serum. In the presence of human serum or exogenously added fatty acids, FASII knockout strains of <i>Streptococcus agalactiae</i> had growth comparable to that of wild-type strains. In two different rodent infection models, the FASII knockout strains showed infectivity comparable to that of wild-type strains, suggesting that the mutant strains survived by assimilating fatty acids from rodent serum. Next steps include examining what membrane-protein functions are altered when exogenous fatty acids are integrated into the membranes of <i>S. agalactiae</i>.</p> <p>AFN-1252 from Affinium Pharmaceuticals Inc. and MUT56-399 from Mutabilis S.A. are small molecules targeting the FabI enzyme in the <i>Staphylococcus aureus</i> FASII pathway. The compounds are in Phase I and preclinical testing, respectively, to treat <i>S. aureus</i> infection.</p> <p>SciBX 2(11); doi:10.1038/scibx.2009.453 Published online March 19, 2009</p>	Unpatented; licensing status not applicable	<p>Brinster, S. <i>et al. Nature</i>; published online March 4, 2009; doi:10.1038/nature07772</p> <p>Contact: Claire Poyart, University Paris Descartes, Paris, France e-mail: claire.poyart@cch.aphp.fr</p> <p>Contact: Alexandra Gruss, National Institute for Agricultural Research, Paris, France e-mail: alexandra.gruss@jouy.inra.fr</p>