This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Infectious disease				
Bacterial infection; Gram-positive bacterial infection; <i>Escherichia</i> ; <i>Staphylococcus</i>	DNA gyrase; topoisomerase IV	<p><i>In vitro</i> and murine studies suggest quercetin diacylglycoside analogs could help treat bacterial infection. <i>In vitro</i>, a lead analog had nanomolar minimum inhibitory concentrations against drug-resistant and drug-sensitive strains of <i>Escherichia coli</i>, <i>Staphylococcus aureus</i> and <i>S. pneumoniae</i>. The analog also had good bioavailability in rats and was well tolerated in mice. Future studies could include testing the lead analog in animal models of bacterial infection. At least 16 companies have approved fluoroquinolone antibiotics that inhibit both bacterial DNA gyrase and topoisomerase IV to treat a range of bacterial infections. The fluoroquinolone antibiotic Delafloxacin (RX-3341) from Rib-X Pharmaceuticals Inc. is in Phase II testing to treat bronchitis, pneumonia, and skin and skin structure infection (SSSI). Aeroquin (MP-376), an aerosolized formulation of the fluoroquinolone antibiotic levofloxacin, from Mpex Pharmaceuticals Inc., is in Phase II testing to treat chronic obstructive pulmonary disease (COPD).</p> <p>SciBX 4(22); doi:10.1038/scibx.2011.629 Published online June 2, 2011</p>	Patented by Okayama University; licensing status undisclosed	<p>Hossion, A.M.L. <i>et al. J. Med. Chem.</i>; published online May 2, 2011; doi:10.1021/jm200010x Contact: Kenji Sasaki, Okayama University, Okayama, Japan e-mail: ksasaki@pheasant.pharm.okayama-u.ac.jp Contact: Abugafar M.L. Hossion, same affiliation as above e-mail: chem.lokman@gmail.com</p>